AMERICAN GAS ASSOCIATION

Monthly

TEMBER
1952

BUY THE BEST

...for the best in cooking

THE SECRET IS IN THE LOW HEAT AND THE REVERE COPPER BOTTOM

Experience shows that the best proves to be the most economical in the long run. This is particularly true in preparing your food, which represents so large a part of the household budget. And that is why buyers of Revere Ware, often attracted first by the beauty of these "Kitchen Jewels," marvel at their economy once they start using them. The copper bottom of Revere Ware spreads the heat more evenly, helps prevent hot spots. The Revere "waterless cooking way," is simple, saves time and fuel, reduces kitchen odors, preserves precious vitamins and minerals, improves flavors.

Revere Copper-Clad Stainless Steel Ware is easy to use, quick to clean, and practically indestructible—you can't burn a hole through it. Revere Ware will prove a lasting tribute to your good taste and far-sighted economy. But make sure you get the *original*. Look for the Revere trade mark in the bottom. Sold by all leading retailers in the United States and Canada. Revere Copper and Brass Incorporated, Rome Manufacturing Company Division, Rome, N. Y.

SEE REVERE'S "MEET THE PRESS" ON NBC TELEVISION EVERY SUNDAY

● **Gas, with the ability to give instantly an exactly controlled degree of heat, makes a winning team with sparkling, quick-heat transmitting copper clad stainless steel Revere Ware. This ad appeared during the summer in eight consumer magazines with a total of 17,934,159 circulation**

WORKMEN apply aluminum paint to a muffler as part of the maintenance program at Texas Gas Transmission Corp., Shreveport, Louisiana

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THE vital, surging growth of the gas industry during the last half decade promises to develop to even greater heights during the next five years, according to announced pipeline and distribution construction plans.

Alert gas utilities are pacing, even vitalizing this expansion by hard-hitting promotional drives to sell appliances and to increase and level their daily load. The exciting and seemingly endless possibilities of fuel gas are encouraging far-sighted planners and investors while drawing the purchasing dollars of consumers.

Gas, with all of the advantages it offers users, is a star in its own right. But hitching your wagon to a star doesn't necessarily mean you're going for a celestial free ride. The gas utilities that are doing their share of pushing their own "wagon," keeping its "axles" well greased with good promotions and avoiding "dragging their feet" with poor public relations are riding rapidly along the road of consumer acceptance.

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Why not a single gas slogan?

● There follows an abridged version of the report of the Sub-Committee to Devise Platform for Use of Single Slogan, of the A. G. A. Domestic Gas Copy Committee. Chairman of the sub-committee is L. C. Roberts, advertising director, Lone Star Gas Co., Dallas; members are D. R. Schively, manager, advertising and sales promotion, The Hartford (Conn.) Gas Co. and G. A. Webber, general advertising supervisor, Consumers Power Co., Jackson, Michigan.

Few, if any, industries have such a wide diversity of interests as does the gas industry. Because of this it is not a simple matter to create a slogan that all segments or interests could or would use. We are not a simple group like the Florists Association which developed the effective "Say It with Flowers" slogan. For instance:

1. There are pipeline or transmission companies formed since World War II who apparently have no extensive knowledge or appreciation of the distribution company's responsibilities and problems in selling and serving its customers. They do little advertising. They have no sales organizations. What kind of a slogan could they use? What kind of slogan would they use? Who would tell them what they should use?

2. There are manufacturers of gas appliances which make a variety of other equipment, some electrical, with varying degrees of national or regional distribution. Each has features or a combination of features on its branded products which receive emphasis in their advertising. Some have slogans of their own. What kind of gas slogan would be effective for these units of the gas industry? Would they be willing to adopt the one decided by A. G. A. as the one they should and must use?

3. Manufactured gas utilities operate in many towns and cities and have sales and promotion problems somewhat different from those of a straight natural gas utility. What kind of slogan would be appropriate for them? Would they adopt

one with as much competitive spirit as would please the natural gas companies?

4. There are combination electric-gas utilities. Each has its own policies concerning the relative importance of their two services when it comes to promoting and selling them. Would these utilities be willing to use a slogan that would have the competitive power which straight gas utilities may insist upon? How could this difference be compromised when straight gas companies think their base load of cooking is at stake and insist on a slogan with competitive power?

5. Many natural gas utilities in areas adjacent to sources of supply have cheaper rates per heat unit. Therefore, they are in position for aggressive promotion of gas service for all kinds of uses. In these areas electric competition is growing stronger. Would these companies accept a slogan watered down in power in order to make it appealing to the two above types of utilities?

6. There are thousands of all kinds of appliance dealers with a great variety of business methods and selling organizations. Most sell electric appliances too. How far would these dealers go in accepting a slogan that was strongly pro-gas?

7. There are many different kinds of distributors with varying lines of merchandise and business methods. Will these accept and use a pro-gas slogan in their advertising?

8. There is the LP-gas industry with its distributors and dealers. Would each in this industry adopt a gas slogan for consistent advertising use?

Considering the complexity of the make-up of the gas industry, on what basis or platform could a single slogan be created for use by all segments?

Before trying to answer that question, let's see what a slogan is and what it should do. What is its purpose?

1. A slogan describes the product or trade of a business, firm or other group, or indicates the advantages to be derived by dealing or associating with it.

2. A slogan must be brief, believable and pleasing. To be remembered, it should have rhythm.

3. A slogan should refer directly to the product and bring out some quality of the product. Some slogans include the product or brand name such as "When Better Automobiles Are Built, Buick Will Build Them."

4. A slogan should appeal to one or more basic wants. Usually it is more effective in selling lower priced goods.

5. A good slogan compels clear discernment of what is and what is not important to the buyer.

6. A slogan should be the essence of the copy. It becomes the seed from which useful ideas grow for the advertising.

7. A slogan should not have a hackneyed sound. It should be distinctive. The phrase should be a fast worker—some-

The members of the Sub-Committee to Devise a Platform for the Use of a Single Slogan, of the A. G. A. Domestic Gas Copy Committee, are, l. to r.: L. C. Roberts, advertising director, Lone Star Gas Co., Dallas, chairman; G. A. Webber, general advertising supervisor, Consumers Power Co., Jackson, Mich.; and D. R. Schiveley, manager, advertising and sales promotion, The Hartford (Conn.) Gas Company

thing that makes one instantly feel that he must *do something*.

8. A slogan can be helpful when the advertiser has a basic concept or impression he wants to establish in behalf of his trademarked product or his firm.

9. Once a slogan gets in circulation, there is a good chance of getting people to accept its thoughts as a part of theirs. You may even get free advertising (like "Now you're cooking with gas"). But to enjoy this benefit *you must say something worthwhile*, word for word.

10. A slogan should be positive—not negative.

We recommend that since distributing gas companies are more closely united than are the other segments of the gas industry because of their common problems, their large contributions to and their joint efforts in A. G. A., that whatever slogan is created must provide the battle cry or rallying point for their promotional activities. Moreover, it is these distributing gas utilities that must carry the responsibility for merchandising leadership.

A fighting slogan is needed by these companies.

It must be a slogan that will rally their organizations.

It must be a slogan that will help them rally their dealer organizations.

It must be a slogan around which strong, unified, coordinated and complete gas equipment sales promotion programs can be built.

It must be a slogan that vigorously makes competition, not follows it.

It must be a slogan that reflects the desirability and quality of gas, and say that it is America's sought-after fuel.

It must be a slogan that helps to beat down some of the misstatements and exaggerations of competition.

It must be a slogan to fire our spirits rather than for the purpose of catching the consumer interest.

We feel that our industry needs double the amount of money for promoting the gas business in the face of today's competition. To do this effectually it needs a thorough study of its sales promotion, advertising, sales training, display, publicity, public relations and related activities, to see if they are sufficient and well enough united and coordinated to meet today's challenge.

Because of the size and complexity of our industry's promotional problems we urge that the gas industry:

1. Undertake, as soon as possible, a survey similar to the Elmo Roper survey conducted a few years back, which would show our present position and point out ways and means for industry action. This survey should be on a "continuing study" basis.

2. Solicit transmission companies for more and larger financial support of national advertising and promotion programs.

3. Plan a model national program which would include every segment of the industry. It might take on the elements of a "crusade" having the effect of unifying the industry toward a common goal. It would include:

(a) Broad public relations program to improve the public's attitude toward our industry with emphasis on benefits and higher living standards rather than on Mcf. and earning growth, and pipeline construction.

(b) A campaign directed to new building field to assure kitchen business. Perhaps a package kitchen offers possibilities.

(c) The adoption of the agency's recommended TV program.

In our efforts to prepare a platform or basis for a slogan we formed the opinion that the industry did not appear sufficiently united on advertising matters to use a slogan nationally; that we strongly felt the need for an "over-all program" around which the industry could rally and that we can see bits of organized planning that if it were unified, would create the spirit to essential whole group action. The place to start, we felt, is with the gas distributing companies.

We of the Domestic Gas Copy Committee can best do our part by accepting the challenge of Dr. Julius Hirsch when he wrote in *Printers' Ink* that the great task of the advertising fraternity is "to improve the efficiency of its work through more systematic, more scientific control of the results of every dollar spent for advertising."

Record convention indicated

A.G.A. convention attendees will profit from the information-packed program, as well as enjoying Atlantic City's famous boardwalk

An impressive array of speakers and subjects has been assembled for the thirty-fourth annual convention and exhibition of the American Gas Association at Atlantic City, N. J., October 27-30, it has been reported by F. A. Lydecker, vice-president, Public Service Electric and Gas Co., Newark, N. J., who is chairman of the A. G. A. General Convention Committee. With nearly five thousand persons having made advance reservations to date, it is believed that this year's attendance will establish a new record. Four hotels, the Dennis, Traymore, Shelburne and Claridge, are now filled and cannot accept further reservations.

Plans for the exhibit staged by the Gas Appliance Manufacturers Association are moving along to successful completion, according to Harold Massey, assistant managing director of GAMA. The expanded exhibit space of 75,000 square feet has been completely sold. There will be more than 170 exhibits displaying over 213 different makes of appliances, ranging from domestic gas ranges through water heaters, house heating, industrial and commercial gas equipment to diggers, trenchers and gas fired chicken brooders.

There also will be eight complete New Freedom Gas Kitchen displays, Mr. Massey points out. As a new feature, the exposition will be open to delegates and guests on Tuesday evening, October 28th from 8.00 p.m. to midnight. Dealers are welcome at the exposition every day and a special entertainment program sponsored by GAMA for members of the convention and dealers will be presented on Thursday evening, October 30th.

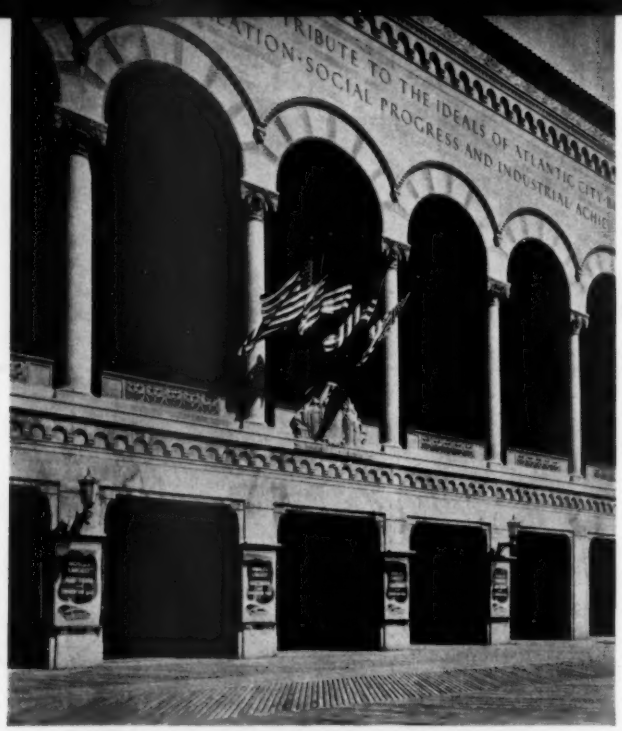
Sectional committees have cooperated splendidly with the General Convention Committee, Mr. Lydecker stated. As a result the tentative advance program which follows, presents talks and discussions of interest to all branches of the industry and to every member of the Association

Because of the growing importance of natural gas in all segments of the gas utility industry, separate meetings of the Manufactured Gas and Natural Gas Departments of A. G. A. will be replaced by a joint meeting in the auditorium ballroom, at 10.00 a.m. on Monday to open the convention. Keynote speakers will bring the delegates up to date on industry and association activities in both branches.

The first general session will open on Monday afternoon. After the report of Treasurer Edward F. Barrett, Long Island Lighting Company president, an address "Where Will We Be In '53" will be given by Charles E. Bennett, president of A. G. A. and president, The Manufacturers Light & Heat Company, Pittsburgh. Mr. Bennett will review the immediate past and forecast the future for the industry.

Professor Sumner H. Slichter, Harvard University, has earned national renown as an economist and an expert on labor problems. His talk on emergency labor disputes and other pertinent phases in this field will also highlight the first general session.

The Convention Entertainment Committee is completing arrangements for the A. G. A. President's Reception on Monday evening. The reception will be followed by a floor



Through these portals of the Atlantic City Convention Hall will pass manufacturers and distributors of today's leading fuel: gas

show and dance.

Frank C. Smith, president, Houston Natural Gas Corp., and first vice-president of A. G. A., will open the general session on Tuesday morning with a talk on sales promotion, a subject with which he is well acquainted, since he has served as chairman of the A. G. A. General Promotional Planning Committee. Louis Ruthenburg, president of GAMA, and chairman, Servel, Inc., will speak on coordinating the objectives of the gas utilities and gas appliance manufacturers. This is a subject that has assumed special importance recently. Executives from both the utility and manufacturer branches have devoted considerable time and attention to a program of coordination. Dr. Gustav Egloff, chairman, Universal Oil Products Company, Chicago, will speak on the place of gas in the present and future economy of the nation. Dr. Egloff has been called a walking encyclopedia of petroleum, so his views on the uses and future supply of gas will be most enlightening.

Presentation of the Distinguished Service Award, Meritorious Service Award, Gas Summer Air Conditioning Award and Home Service Achievement Award will be made by A. G. A. President Charles E. Bennett at the general session on Tuesday.

Several luncheon meetings will be held Tuesday noon and delegates are reminded that tickets for each of these will be on sale at the registration desk in the auditorium lobby. Competent speakers will address each group.

John H. Mathis, vice-president and secretary, Lone Star Cement Corp., New York, will be the guest speaker at the luncheon for corporate secretaries, West Room, Haddon Hall. The Rate Committee will lunch at the Mandarin Room, Haddon Hall, and the Insurance Committee will have a luncheon meeting at the Board Room in the Claridge.

The Industrial and Commercial Section will have a qualified speaker on the subject of "Public Relations" at its luncheon Tuesday noon in the Rose Room at the Hotel Traymore. Continuing on in the afternoon session the section will present a chairman's report by Ronald A. Malony, executive vice-president, Bridgeport Gas Light Co., followed by a report of the nominating committee and election of officers for the coming Association year.

F. A. Kaiser, vice-president, Detroit-Michigan Stove Co., is known throughout the industry for his Mr. Flame and Mrs. Flameless demonstration. He will have an equally interesting talk on research work done on deep fat fryers at the afternoon session. Other speakers will evaluate the section's commercial cooking campaign, "Proof of Profits," and also discuss the subject of profitable rates for industrial gas.

The Residential Gas Section will meet at 2.00 p.m., Tuesday, in Trimble Hall, at the Claridge Hotel. W. J. Schmidt, assistant vice-president, Long Island Lighting Co., chairman of the section, will report on progress made by the section under the long range plan, initiated two years ago. He will discuss the need for aggressive merchandising, increased manpower and other residential sales problems.

Howard D. Valentine, manager of sales promotion, The Peoples Gas Light & Coke Co., Chicago, will speak on "The Death of a Salesman," and will tell why the Willie Lomans in the gas industry also may expire. With approximately 85 percent of gas appliances now being sold through dealers, the appliance dealer has assumed a prominent spot in the utility merchandising picture today. W. D. Williams, sales manager, The New Jersey Natural Gas Co., Allenhurst, N. J., will discuss "Pattern for Profit," outlining the new dealer sales program organized by the Dealer Sales Committee of the Residential Gas Section and financed by the A. G. A. Promotion, Advertising and Research (PAR) Plan. The program includes booklets and brochures on selecting and training sales personnel, on promotional and advertising helps and on sales techniques.

C. S. Stackpole, vice-president, Eureka Williams Corp., Bloomington, Ill. will prove that: "To Sell, Ya Gotta Tell." "Chet" Stackpole is well remembered in the gas industry. He served as chairman of the Residential Gas Section, and his ability to put over selling truths is well recognized. Closing the Residential Gas Section program will be W. Paul Jones, president, Servel, Inc. He will talk on "Operation Achievement" and will present the awards to the winners in the A. G. A.-Servel "Open-the-Door" gas refrigerator sales campaign.

The Home Service Committee will hold a round table buffet luncheon and conference at the Traymore Hotel on Tuesday. The round table will include a symposium of three short talks on current home service activities. Harriet Jean Anderson, director of the Home Institute of the *New York Herald Tribune*, and contributor to *This Week* magazine will present some ideas for home service representatives. The meeting will adjourn in time to attend the Residential Gas Section meeting at Trimble Hall, Hotel Claridge at 2.00 p.m.

On Wednesday morning at 8.00 a.m., Home Service will offer the famous Home Service Breakfast at the Traymore Hotel. Guest speaker will be Miss Carolina Hood, director of public relations, Rockefeller Center, New York. Miss Hood was winner of the 1952 "Woman of Achievement"

(Continued on page 40)

Construction of gas distribution facilities is scheduled to exceed even the spectacular postwar expansion

Vitality marks gas growth plans

The nation's gas distribution and pipeline industry will spend about $5.6 billion for construction of new facilities and expansion of plant in the five-year period extending from 1952 through 1956, according to a study by the A.G.A. Bureau of Statistics. This compares with construction expenditures of $5.1 billion over the past five years, a previous high record in the gas industry.

The natural gas branch of the industry expects to spend $5,099,000,000 in its five-year expansion program, compared with $4,560,000,000 spent in the 1947-1951 period. Expanded transmission facilities will cost an estimated $3,075,000,000 in the next five years, with $415,000,000 allocated to production facilities and an additional $82,000,000 estimated for underground storage expansion.

All other types of gas will account for about $500,000,000 in new construction in the next five years. Expanded distribution facilities will cost an estimated $302,000,000 and $150,000,000 will go toward production and storage facilities.

Despite shortages of essential pipe and other materials the gas industry expended a record $1,461,500,000 in 1951 for construction of new facilities. This sum exceeds the previous peak established in 1950 by $263,200,000, or 22.0 percent.

Indications are that there will be a temporary slackening of construction expenditures during 1952 because of continued allocation and material difficulties. However the estimated expenditure of $1.17 billion in 1952 still represents the third greatest annual expenditure in gas industry history. A number of major pipelines were completed in 1951 and augmented capacity of the nation's pipeline system in 1952 will be accomplished to a greater extent than before, through installation of additional compressor,

(Continued on page 32)

GAS UTILITY CONSTRUCTION EXPENDITURES, BY TYPE OF GAS AND BY PLANT FUNCTION, 1951-1956

(Millions)

Type of Gas and Plant Function	Actual 1951	Forecast 1952	1953	1954	1955	1956	Total Forecast 1952-1956	Total Actual 1947-1951
Natural Gas—Total	$1,363	$1,067	$1,571	$1,206	$645	$610	$5,099	$4,560
Production	124	91	102	72	75	75	415	511
Transmission	867	607	1,133	820	275	240	3,075	2,939
Underground storage	42	40	20	12	5	5	82	a
Other storage	15	5	6	12	10	5	38	a
Distribution	271	279	279	264	255	260	1,337	958
General	44	45	31	26	25	25	152	152
All Other Types of Gas—Total	98	106	110	98	91	91	496	586
Production and storage	19	31	39	29	23	28	150	221
Transmission	6	1	2	2	4	2	11	23
Distribution	66	70	62	61	55	54	302	314
General	7	4	7	6	9	7	33	28
Total Industry—Total	1,461	1,173	1,681	1,304	736	701	5,595	5,146
Production and other storage	158	127	147	113	108	108	603	732
Transmission	873	608	1,135	822	279	242	3,086	2,962
Underground storage	42	40	20	12	5	5	82	a
Distribution	337	349	341	325	310	314	1,639	1,272
General	51	49	38	32	34	32	185	180

a. Included in production.

Vigorous free enterprise has promoted the natural gas industry's growth despite encompassing regulations

Don't fetter the growing giant!

By MARSHALL NEWCOMB

General Counsel
Lone Star Gas Company
Dallas, Texas

The American gas industry presents its own record of recent years as unanswerable proof that free men, acting voluntarily in providing people's needs, can and do serve the common good more surely and more efficiently than could be the case under any system of compulsion and regimentation. Certainly so far as Texas is concerned it is the most regulated of all public service businesses.

The production of gas in Texas is subject to regulation under broad and comprehensive conservation laws which are administered by the Railroad Commission of Texas. The production, transportation or use of natural gas in such manner and in such amount or under such conditions as to constitute waste is unlawful and prohibited.[1]

In addition to its regulatory powers under the conservation laws, the Railroad Commission has been given a broad jurisdiction over the rates and practices of natural gas utilities engaged in the transportation, distribution and sale of natural gas in Texas.[2] The Commission may establish and enforce fair and reasonable rates and charges, establish rules for the full control and supervision of gas pipelines, establish a division of the proceeds from the sale of gas between companies producing and transporting the gas and companies selling it, regulate and apportion the supply of gas between cities, towns and corporations when the supply of gas is inadequate, prescribe rules requiring gas pipelines to augment the supply of gas when in the judgment of the Commission it is practicable to do so, and require and regulate the odorization of gas which is supplied for private or commercial uses to any public building or to the general public.[3]

Natural gas utilities are also regulated by incorporated cities and towns in Texas. The governing bodies of all incorporated cities and towns have the power to prescribe rules and regulations under which natural gas service shall be furnished and to regulate the rates charged for such service. A gas utility may appeal to the Railroad Commission from the regulatory action of a city or town, and the matter is there tried and determined *de novo*.

A natural gas company which transports or sells natural gas for resale in interstate commerce is subject to regulation under the Federal Natural Gas Act with respect to practically all phases of its business and operations.[4]

The Federal Power Commission fixes the rates for all natural gas sold for resale in interstate commerce. It prescribes the accounting practices and methods of a natural gas company, and no natural gas company may install, operate or abandon any facility employed in the trans-

Abridged version of an address before the annual convention, North and East Texas Press Association, Waco, May 9, 1952.

portation of natural gas in interstate commerce without first having obtained a certificate of public convenience and necessity from the Commission.

In the issuance, marketing and listing of securities, natural gas companies are subject to regulation by the Securities and Exchange Commission.[5]

Under all of this regulation, and considerably more which could be mentioned, numerous reports must be filed and many administrative proceedings conducted.

Natural gas utilities do not have the same freedom of action as do the non-utility members of the petroleum industry who engage in the production, refining and marketing of oil and gas and other petroleum products. Generally speaking, the non-utility members have a large degree of freedom and discretion in the raising of money, in the keeping of their accounts, in their general business practices, in the services they render, and in the charges which they make for their products and services. A natural gas utility buys its products from those whose charges are unregulated, but it must sell the same products at regulated prices and under regulated conditions of service.

Notwithstanding all of this, and in the face of it, great achievements have been obtained by the natural gas industry in a remarkably short time. It was only a relatively short time ago that the American gas industry was the stepchild of the utilities and the unnoticed branch of the petroleum industry. Fifteen years ago there was general pessimism about its future and leaders of public opinion gave striking expression to this view. New York's Mayor LaGuardia ventured the prediction that the next generation would have to go to a museum to see a gas range. Roger Babson, noted economist, said that the long range outlook of the gas industry was so bad that its senior securities ought to be liquidated as soon as possible. Only a few years ago, I saw in the show window of an electric utility ancient models of gas cooking ranges alongside of recent model electric ranges and with them there was prominently displayed this thoughtful benediction, "The passing of the flame." Such fair competition!

Today, the consumers of natural gas are more than 52 percent greater than they were in 1935, and this enormous gain was made during a period in which the population of the country increased less than 20 percent. In 1935, total gas sales, expressed in thermal units, were about 13 billion therms. In 1950, sales amounted to 42 billion therms, a gain of 223 percent. It is significant that this service has been provided at a constantly lowering cost to the consumer. The revenues of the industry in 1935 amounted to about $750 million. In 1950, they amounted to nearly $2 billion. *Thus, the average customer received about 63 percent more therms for his dollar in 1950 than he did in 1935.* At the present time my own company is receiving for the service which it renders to its 600 thousand residential consumers rates which

● *A minimum of restrictive regulations will aid de*

are substantially less than those prevailing in 1935. This makes no allowance for the inflation in today's dollar. The price index of all commodities in 1950 was 73 percent higher than in 1935, and as of today, the inflation is even greater. It is an indisputable fact that the inflated dollar of today buys much more gas than did the dollar of 1935, and this cannot be said of any other fuel.

The discovery of new reserves and the production of natural gas have kept pace with the immense market demand therefor. Last year production reached the total of nearly 8 trillion cubic feet. This was nearly four times as much as was produced in 1935. In spite of this high volume of annual production, the proved reserves of natural gas have increased progressively. Although in 1951 there were produced nearly 8 trillion cubic feet, there were added to existing proved reserves 8.2 trillion cubic feet, bringing the total of proved reserves to 193.8 trillion cubic feet. The greater portion of these reserves are located in the five states of Texas, Louisiana, Kansas, Oklahoma and New Mexico, with Texas having 105.6 trillion cubic feet, or more than 50 percent of the total proved reserves of the nation.[6]

There is much discussion of whether an excessive amount of natural gas is being exported from Texas and the other southwestern states and of whether the policy of permitting unrestrained exportation is a wise one. There are many and divergent points of view with respect to this subject and each side of the question seems to have its own set of figures and statistics to support the particular view taken. The problem is two-fold. One is legal and the other is economic. In their scope, one is national and the other is state or regional.

The legal considerations are hardly open to debate. In matters involving interstate commerce the federal constitution does not recognize state lines. It is actually a misnomer to speak of the transportation of natural gas from the state of production to another state for consumption as "exportation." The term will be used in this article only to describe

development of natural gas producing areas for maximum intra- and extra-state good

transmission from one geographical state to another.

The states should not proceed on the false premise that the exportation of natural gas to other states can be prohibited by state action. It is plainly not permissible for a state to deal with its natural gas on the supposition that it can prohibit its transportation to other states for sale and consumption. Any state law, regulation or taxation which has the *practical* effect of directly burdening, regulating or prohibiting the sale or transportation of natural gas in interstate commerce will represent a waste of time, energy and money. The states of Texas, Louisiana, Kansas, Oklahoma and New Mexico have become major sources of supply for gas moving in interstate commerce. In each of these states there have been advocates for state legislation which would prohibit the exportation of natural gas altogether or limit the quantity which could be exported or discourage its exportation by taxation. Many years ago, Oklahoma and West Virginia enacted specific legislation along these lines, and quite recently Louisiana did likewise. Their efforts were unsuccessful.

As early as 1907, Oklahoma enacted a law which in effect prohibited the transportation of gas out of Oklahoma to points of consumption in Kansas. Oklahoma complained that it needed all of its gas for its own citizens. It showed that its population was steadily increasing—that it had no domestic fuel except coal and natural gas—that its supply of coal was growing rapidly more costly to produce—that the petroleum oil produced in the state was practically all transported out of it—and that substantially the only natural, practicable, usable fuel for both domestic and industrial use was natural gas. Oklahoma, by evidence, painted a dismal picture for its citizens if the existing and planned exportation of natural gas in great quantities were permitted to continue. The Supreme Court of the United States rejected Oklahoma's plea and held the legislation unconstitutional.[7]

In 1909, West Virginia enacted a statute which was intended through regulation of pipeline companies to compel the retention within that state of all natural gas produced therein which might be required for local needs. What West Virginia sought to do was to prevent the transportation of its natural gas into Pennsylvania and Ohio to an extent which would endanger the requirements of its own citizens. It was no more successful in the Supreme Court than was Oklahoma.[8]

West Virginia also sought to discourage the exportation of its gas by levying a tax upon the transportation of natural gas by pipeline, and again it was unsuccessful. Insofar as the tax was applied to the transportation of natural gas in interstate commerce, the Supreme Court of the United States held that it was a prohibitive burden upon that commerce.[9]

More recently, Louisiana challenged an order of the Federal Power Commission granting an interstate pipeline company authority to construct additional facilities for the exportation of gas from the state. Louisiana lost.[10]

Courts favor free flow

Recent trends in the law and national policy have not diminished the force or effect of the legal decisions and philosophy. Rather, they have been strengthened in recent years. It is wishful thinking to anticipate that the Supreme Court of the United States will uphold state laws or state taxation which prohibit, restrain or burden the free flow of natural gas in interstate commerce. The Congress in the Natural Gas Act has declared that the transportation and sale of natural gas in interstate commerce is a matter which affects the national interest and has provided for federal regulation thereof. As a result of these federal laws and regulations, natural gas has become the fuel and energy resource upon which millions of people throughout the country are dependent. And these considerations conclusively preclude the realization of any such wishful thinking.

From an economic standpoint those persons who are sympathetic with the view that there should be no restraint upon the exportation of gas from Texas and the southwest, emphasize these points:

Before the long transmission lines came into Texas there was not an adequate market for natural gas, and large quantities were being wasted in the production of oil and in the recovery of natural gasoline; that with the increase in the export market this waste has been almost entirely stopped and the price of gas at the well and in the field has greatly increased to the financial advantage of the lease owner, the royalty owner and the State; that the known and prospective reserves of natural gas are sufficient not only to support existing markets but additional markets for generations to come; and that natural gas has just as much right to hunt for a market as has oil, since natural gas is no more irreplaceable than is oil.

This side of the question has been many times presented, but more recently by General Ernest O. Thompson, a member of the Railroad Commission and a man whom we all highly respect for his ability, sagacity and able public service.[11] In his terse style of presentation, General Thompson said:

> "I am not one of those who worry about Texas exporting gas to other states. As I have stated before, it was the advent of the out-of-state pipelines that brought the price incentive and the competition that has more nearly brought a fair price for gas on currently made contracts.
>
> "Natural gas has just as much right to hunt for a market as has oil to search for markets. Natural gas is no more irreplaceable than is oil. Both are natural resources.
>
> "We rejoice when an oil field in Texas gets a pipeline outlet, and we hunt for markets for Texas oil all over the globe.
>
> "So why deny natural gas producers the same opportunity to find a market? We must be fair about this matter of gas export. Who is going to pay the gas producer to hold his gas for some future local manufacturing de-

(Continued on page 42)

Sales-proved promotions

There's a wealth of ideas among the many original methods that alert utilities are using to take the gas story to consumers

Open House (below) at The Minneapolis Gas Co.'s Cavalcade which featured a series of six modern ens and laundries. Robert Calrow demonstrates en's advantages to two guests. (Top right): A wi play of New Freedom Gas Kitchen by Minneapol

Alabama Gas Corporation

The Alabama Gas Corp. is waging a campaign against competition. According to the plan, the utility asks an interested customer to invite five or six friends to her home for a dryer party, the feature of which is an automatic gas clothes dryer on loan from the company. Before the party, the customer washes one load of clothes. This is placed in the dryer at the beginning of the demonstration to test the timing of the dryer's operation.

During the operation, GASCO—a game much like bingo—is played. Each winner receives a towel, and if one person wins twice, she receives a wash cloth to match the towel. After the game, the operation of the dryer is explained, its advantages discussed, and the dryer-dried garments are passed around to discuss fluffiness. As each guest leaves, she receives a bath towel, hand towel and wash cloth, while the hostess receives a set of six.

Central Illinois Gas & Electric Co.

Rockford, Ill. is going one step further with the Heart-Saver Kitchen than many communities. In addition to building a complete demonstration heart kitchen for cardiac housewives, the Central Illinois Gas & Electric Co. is sponsoring a comprehensive educational program in cooperation with the Winnebago County Heart Association.

The course, which is intended primarily for cardiac women, is conducted in the utility's auditorium. Patients are referred to the classes by their physicians; after that, if the auditorium is not filled, the course is thrown open to all homemakers interested in work simplification. All instructors, including a graduate home economist, are volunteers who also give free consultation and instruction in the home to those who are unable to attend the regularly scheduled sessions.

Lectures from the utility and heart association have shown the Heart of the Home film and have spoken to scores of community groups.

The Rockford Heart Saver, produced by Mutschler Bros. Co. of Nappanee, Ind., is the first to go on display in Illinois. Because of the willing cooperation of volunteers, utility, newspapers and heart association, it is gaining recognition and fame throughout the state.

The East Ohio Gas Company

In The East Ohio Gas Co.'s territory there are lots of small towns and tiny hamlets—out-of-the-way places where the wonders of gas would seldom be heard except for the utility's cooking caravan.

The caravan, now an established home service institution in Ohio, has been one of the gas company's most effective ways of advertising gas in its rural areas. Comparable in many respects to a four-ring circus, it demands the showmanship and promotional genius of a P. T. Barnum. Local appliance dealers, newspapers and civic groups join hands to advertise the caravan weeks ahead of time. And added to East Ohio's own promotion, the hoopla is more than enough to interest every last Mrs. Rural Ohio.

The project's aim is to demonstrate how better homemaking is possible with New Freedom gas appliances, *not* to teach experienced cooks how to make biscuits.

To pack an extra wallop, local appliance dealers arrange a display of gas water heaters, incinerators, dryers and refrigerators, and they usually donate one major gas appliance for a grand prize drawing, one of the caravan's feature attractions.

Stage setting (left) for Ohio Fuel Gas Co.'s travelling cooking school is model kitchen. (Above): Humorous touch is offered by Paul Clifford who sets stage for cold weather recipes with red flannel nightshirt. Home economist, who performed in 45 Ohio towns, is Harriet Wolfe

But home service girls do most of the work. Constant planning and practice are keystones of success, for every dish must be a culinary masterpiece to interest the veteran homemakers. The actual program takes but 20 minutes, but in that short time, an entire New Freedom Gas Kitchen is demonstrated and an appetite-tempting menu is prepared. Much of the "background cooking" such as baking pie shells, making jello, creaming butter and sugar, is done ahead of time.

The behind-the-scenes effort is stupendous. Potential sites must be investigated, equipped and often cleaned. Every item, from juicy meat roasts to humble paring knives, must be loaded on a huge truck along with specially-adapted portable sink, cabinet, gas range, clothes dryer, refrigerator and incinerator. An amplifying system is a necessity, because the acoustics in many of the small-town auditoriums are poor. Folders with mimeographed copies of every recipe must be prepared.

The caravan demands of its cast a high degree of poise, resourcefulness and real acting ability. The troupers of the show, Home Service Director Dorothy Pearson and staff, have proved themselves capable. For despite all the planning, hectic circus-like excitement always develops. A typical example of the unexpected was the intrusion one day of a rangy, hard-to-catch alley cat who threatened to steal the show by strolling back and forth across the stage!

The caravan is a difficult, ambitious undertaking, but in the same bravado spirit of the big tent, it is a most sucessful promotion. Above all, it proves that gas promotions can be carried miles from utility headquarters.

Metropolitan Utilities District

Viewing the gas-fired incinerator as the right answer to the housewife's and the small business man's garbage and trash problems, Metropolitan Utilities District, Omaha, has based a successful campaign on the belief that "if we can tell the story to enough people we have no sales problems."

Their thinking has paid off with 1951 sales 3887 percent above those in 1947, and 36 percent above those in 1950. Starting with a modest 16 sales by the utility in 1947, sales have risen steadily until 638 units were sold in 1951.

A two-month sales campaign in 1951 was backgrounded by radio, television and local newspaper advertising, in which local citizens told of the advantages they had from having a gas-fired incinerator. Sending mailing pieces to gas furnace users proved very effective.

Advertising themes emphasized the gas-fired incinerator's ability to cut down fire hazard through removing inflamable rubbish, do away with unpleasant odors, and eliminate the garbage can with all of its objectionable features.

Selling efforts were encouraged by a novel arrangement that entitled the salesman to one punch on a punchboard for each sale he made. From this he received from 50¢ to $10. While this type of bonus paid off very well, company officials now believe that more stress should be placed on the importance of making user calls. During the coming campaign it is planned to give the salesmen credit for the number of user calls made. Says Joseph E. Walsh, Metropolitan's director of sales, "We find the situation parallels that of the automatic gas clothes dryer user, in that everyone who uses an incinerator is a booster, a good sales ally and good source of leads."

Newark, N. J.'s Heart-Saver Kitchen is exact replica of model made famous by "Woman's Home Companion"

Chicago billboard invites Peoples Gas Light and Coke customers to learn the plus values of gas refrigeration

Minneapolis Gas Company

The Heart-Saver Kitchen promotion that boomed in Minneapolis this Spring was a result of the cooperative teamwork of the Minneapolis Gas Co., The Minnesota Heart Association, and Mutschler Bros. Co., manufacturers of kitchen cabinets.

Over 200,000 persons visited the Heart of the Home Kitchen (featured nationally in *Woman's Home Companion*) at the local builders' show and then for six weeks on the utility's sales floor.

On opening day of the builders' show, such interest was shown that the kitchen, fully equipped with modern automatic gas appliances, had to be roped off so that a demonstration could be conducted. Scores of Minneapolis home builders requested plans, while appliance and cabinet sales increased noticeably.

Minneapolis is an extremely heart-conscious community, the only one in the country which has a hospital dedicated solely to the treatment of cardiac ailments. Because of this favorable attitude and the utility's hard-hitting promotion, the Heart of the Home has been an overwhelming success.

Under the direction of Kitchen Planning Director Robert Calrow, the utility is doing an outstanding job promoting other modern, all-gas kitchens in addition to the Heart-Saver. No less important to Mr. Calrow and his staff are the other New Freedom Gas Kitchens in the gas company's 1952 Cavalcade. Featured in the Cavalcade are six unique kitchens and laundries, entirely equipped with the most modern automatic gas appliances. Set up on the utility's exhibition floor, the display is changed completely three times each year.

Made possible through the efforts of almost one hundred distributors and dealers of appliances and cabinets, the Cavalcade is being widely advertised in local newspapers and in the utility's bill inserts.

When a Minneapolis homemaker visits the display, she is given an envelope containing full information on furnishings and equipment, kitchen appliance manufacturers' sales booklets, lists of local plumbers and suppliers and the A. G. A. Kitchen Planning Guide.

The Minneapolis Kitchen Cavalcade, starring top names in furnishings, cabinets and automatic gas appliances, gives the homemaker a kitchen to dream about, and the unusual opportunity actually to *see* what it will look like. Needless to say, the response has been overwhelming. The utility is proud that largely because of its efforts, in Minneapolis "Smart Cooks Know—Gas Has Got It!"

New York & Richmond Gas Co.

On Staten Island, the New York & Richmond Gas Co. is in hot water and loves it. Under the direction of assistant sales manager Richard A. Plata, the utility's hard-hitting automatic gas water heater campaign has boosted sales 110 percent above figures for comparable months last year. The future looks even brighter.

This remarkable success, in spite of a nationwide slump in heater sales, is the result of coordinated advertising and vigorous sales promotion. Advertising in the local newspapers, buses and trains has featured big trade-in allowances, 60-day trials and dependable gas company service. These ads, encouraging prospective customers to "ask us or your plumber-dealer" bring dealers into the campaign, and as a result they are also reaping the benefits of increased sales.

All non-sales employees have been offered liberal bonuses for prospect names who eventually become purchasers. Because of this angle, meter and customers' service men have carried the sales talk directly into Staten Island homes. Their initial ground work is followed up with calls by the utility's professional sales staff.

For the regular sales force, commissions on water heaters have been increased and bonus contests aimed at higher sales have been organized with amazing results.

One of the most encouraging aspects is that figures reflect few bulk "housing development" deals, but for the most part show sales of quality equipment to individual suburban home owners.

In Staten Island, the automatic gas water heater is no longer a luxury, but a practical, economical necessity in widespread use.

The Ohio Fuel Gas Company

Props packed, scenery secure, the Ohio Fuel Gas Co.'s traveling cooking school is ready this month for its fourth post-war tour of the Ohio homemaker circuit.

Those responsible for the company's big gas-cooking promotion confidently predict that this year's show will have even more success than the 1952 version

which played before some 66,000 persons in 45 Buckeye cities and towns.

The school's two road troupes travel in special car-and-trailer combinations which carry the portable, all-gas kitchens and other props and scenery. Kitchens form the stage settings in the auditoriums and theaters where the schools are booked.

Each troupe is composed of a home economist from Ohio Fuel's home service department and a show manager. The home economists combine the talents of lecturer, actress, cooking instructor, appliance demonstrator and good-will dispenser for the gas company. The show manager takes light parts on-stage and supervises the packing, stage management, travel arrangements and thousand-and-one other details that go with a road show. These two permanent members of the cast are helped by the gas company employees of the towns in which the show appears.

Peoples Gas Light & Coke Co.

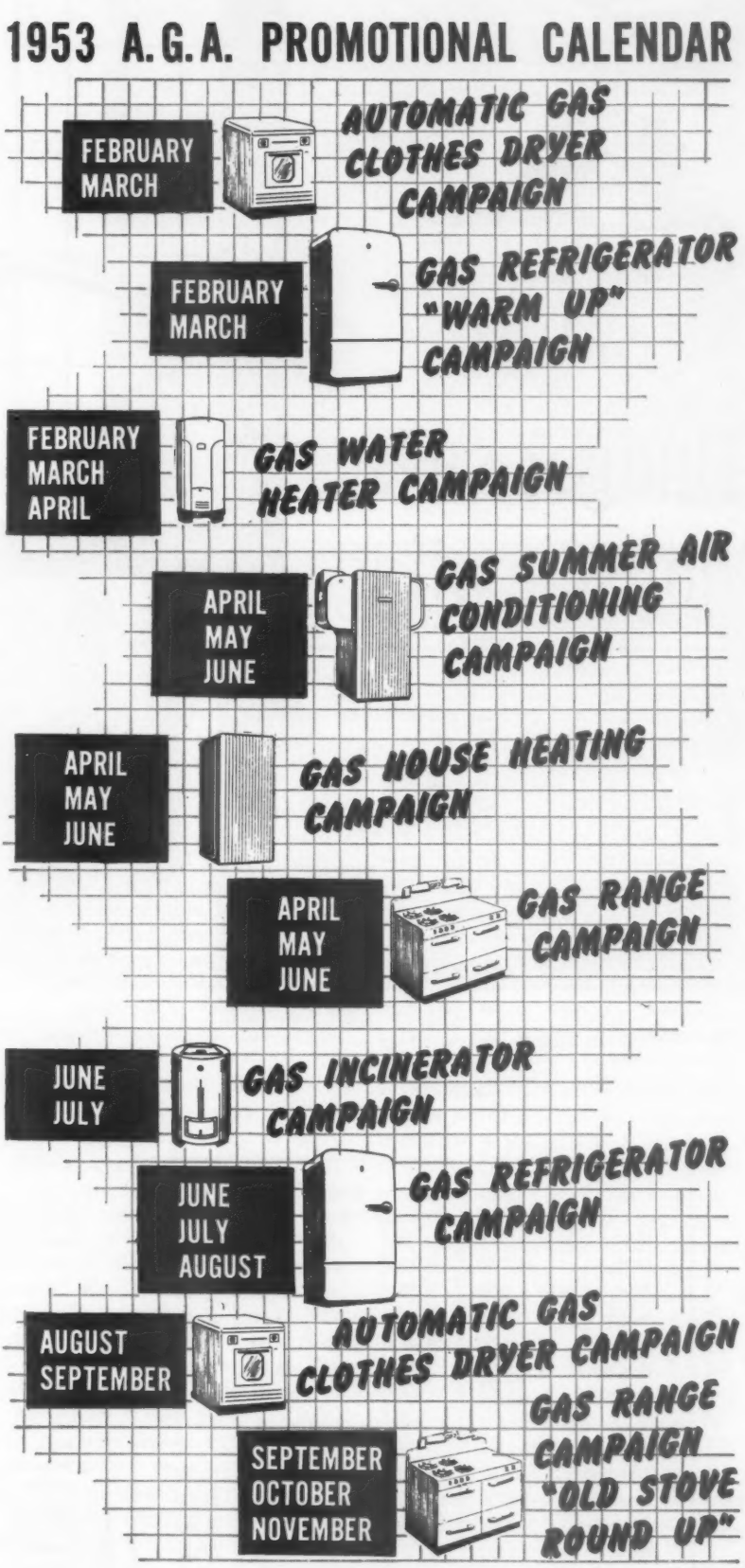
The Proof of Superiority Campaign inaugurated by The Peoples Gas Light and Coke Co., during the past decade, is now the theme of a nationwide program sponsored by Servel, Inc., the manufacturer of the modern gas refrigerator.

Initiated March 1, 1941, by the Chicago utility, and interrupted for 34 months by World War II, and again for 26 months by Regulation W, the promotion has a proved record of continuing success. In the light of this success, the name of the promotion has justifiably been changed to "Proved superiority."

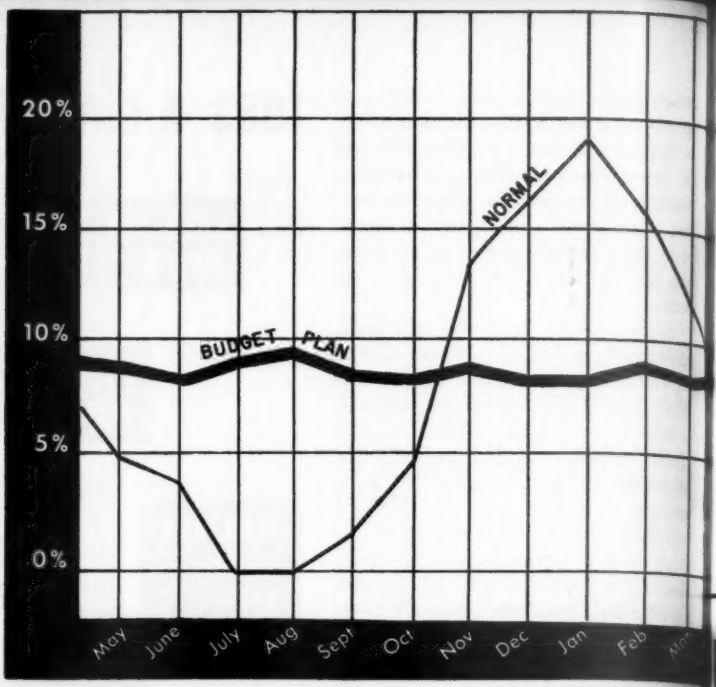
The promotion is based upon a down payment, with deferred payments to commence after a 60-day trial installation. Says Bernard H. Wittmann, domestic sales manager, who originated the program, "The offer makes it easier for our saleman by overcoming customer resistance and by paving the way for his sales presentation. To the salesman's efforts the plan adds the most potent salesmanship of all: the opportunity for the housewife to convince herself."

Every conceivable sales and promotional help is given the sales people and comprehensive consumer publicity in various forms precedes and parallels the period of the campaign. Outside

(Continued on page 39)



Budget sells householeating



Apportionment of gas householeating costs over twelve months lifts the strain of peak payments from the customer's winter budget—when fall half of annual heating cost (fine line)—while almost eliminating high bill complaints and delinquent payments

Cold weather heatings bills need no longer harass a home owner in Portland, Oregon. The Portland Gas & Coke Co. recently announced a new budget plan for leveling off winter heating bills and thereby aiding the family budget.

Since over 50 percent of the entire year's heating cost normally comes during December, January and February, the Gasco Budget Plan levels off those three months by means of credit built up during the summer and early fall.

Customer response to the plan has been enthusiastic, reports Paul F. Leary, superintendent of Gasco's customers office. Over 1,350 house heating customers requested the budget plan during the first month following the mailing of an attractive folder explaining the plan to Gasco's 25,000 heating customers.

The plan works this way: During the five months when the heating costs are at the very lowest, budgeted amounts are added to monthly gas bills. Then during the five coldest months, when heating costs normally are higher, budgeted amounts are subtracted from the customer's bill. The result is a moderate monthly gas bill, regardless of the season.

Gasco does all the bookkeeping and pays a bonus equal to about 3½ percent interest per annum on the amounts added to the summer bills. The interest is deducted each year from the customer's April gas bill.

Five budget plan amounts have been set up to meet customer needs—$30, $45, $60, $75 and $90. Another plan, for $105, has been set up also, but this one is for multiple dwellings. Usually, the amount chosen is the one that approximates one-fourth of the customer's yearly gas bill.

Under the $30 plan, for example, $30 in credit is built up during June, July, August, September and October to "level off" bills for the months of December,

(Continued on page 47)

	$30 Budget	$45 Budget	$60 Budget	$75 Budget	$90 Budget
AMOUNTS ADDED TO SUMMER GAS BILLS					
May	0	0	0	0	0
June	5.50	8.25	11.00	13.75	16.50
July	6.00	9.00	12.00	14.50	17.50
August	7.00	10.50	14.00	18.50	22.00
September	6.00	9.00	12.00	14.50	17.50
October	5.00	7.50	10.00	12.50	15.00
TOTAL	29.50	44.25	59.00	73.75	88.50
AMOUNTS SUBTRACTED FROM WINTER GAS BILLS					
November	0	0	0	0	0
December	6.00	9.00	12.00	15.00	18.00
January	7.00	10.50	14.00	17.50	21.00
February	7.00	10.50	14.00	17.50	21.00
March	7.00	10.50	14.00	17.50	21.00
April	3.00	4.50	6.00	7.50	9.00
TOTAL	30.00	45.00	60.00	75.00	90.00

In a simple explanation of the plan, customers are given the choice of five budgets, left, depending upon how much they want added to summer gas bills and deducted from winter billings. The work-out of an actual case, below, shows how the plan balances

	Actual Bills	$30 Budget	Bills Invoiced by Budget Plan
May 1951	8.68	+ 0	8.68
June	6.62	+5.50	12.12
July	5.71	+6.00	11.71
August	5.89	+7.00	12.89
September	5.71	+6.00	11.71
October	6.07	+5.00	11.07
November	12.33	− 0	12.33
December	18.25	−6.00	12.25
January 1952	20.68	−7.00	13.68
February	16.58	−7.00	9.58
March	15.52	−7.00	8.52
April	11.72	−3.00	8.72
TOTAL	133.76		133.26

Designed for efficiency and beauty

Contract clerks talk with customers in convenient telephone-equipped booths, upper picture. The office exterior, lower left, is of maroon and gray structural glass. Right, appliances are displayed and business transacted in an atmosphere of spacious beauty

Service and beauty go hand-in-hand in the new customer service office that United Fuel Gas Co. has opened in Charleston, West Virginia.

The company remodeled a former cafeteria in a downtown office building to create a local office separate from the general operations of United Fuel, key firm in the Charleston Group of the Columbia Gas System. In it they included appliance display space, a seating section for those waiting to meet a friend or just pausing to rest, and service consultation booths. In addition, there are on the first floor a community service center where civic groups may install small displays, cashiers' booths and private offices.

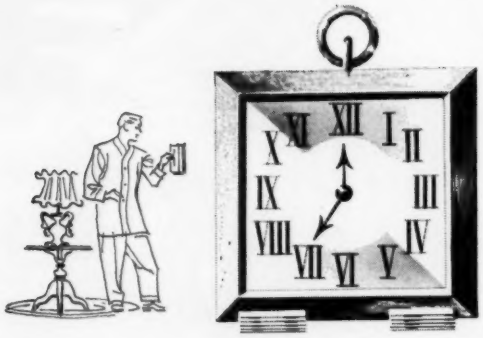
On the mezzanine are more offices, while additional offices and accounting space are on the second floor, along with the home service auditorium and New Freedom Gas Kitchen.

Striking modern design is an eye-arresting feature of the new set up. Walnut and prima vera plywood trim is used generously on painted masonite walls. The acoustic tile ceiling has inset, flush-mounted fluorescent lights, spots and combined air-conditioning-heat anemostats. Irregular shaped egg-crate ceilings are suspended over two long areas of the main floor customer service room.

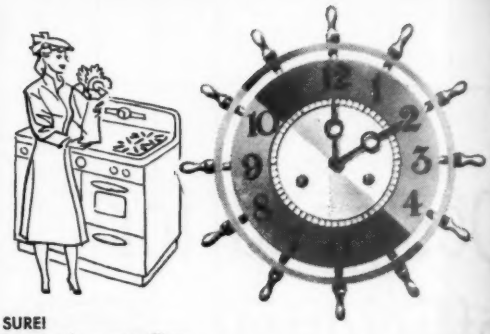
The impact of these features is multiplied by a warm balance of tones of blue, dull rose, yellow, green and cream. The exterior is of maroon and gray.

For the convenience of consumers and dealers, the new office includes a display of gas appliances and a tiny kitchen nook. A home service girl is to be on the floor at all times to tell visitors of the advantages of these gas appliances. Gas appliances are not sold by United Fuel Gas Company. The gas appliance promotion department simply helps dealers to sell their goods. Visitors are told where the display appliances may be purchased.

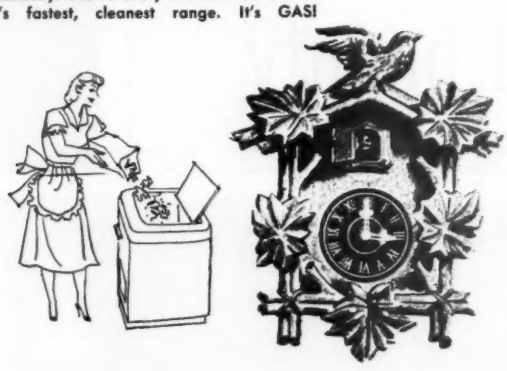
Eighteen wall-hung Kodachrome transparencies, illumined from behind by fluorescent tubes, illustrate in full color how gas appliances fit into many arrangements of modern kitchens. Above the community service center hangs an air photo of the city. Behind the cashiers' counter, a montage combines 21 pictures of phases of the gas business that make good service possible.



WAKEN TO COMFORT! What a wonderful way to start the day! A touch of the thermostat and, presto—cozy rooms! What convenience! What clean, thrifty heat . . . with GAS!



SUPPER AT SIX? SURE! Make the most of your afternoons. Shop . . . visit . . . relax—while a wonderful meal cooks automatically. You've every convenience. You've today's fastest, cleanest range. It's GAS!



NO TIME FOR TRASH! Zip! As household wastes accumulate, pop 'em into your gas-fired disposal unit. So modern . . . so convenient . . . so quiet . . . and so efficient because it's GAS!

A clock-themed ad series and a distinctive slogan keynote an all-out drive to sell the superiority of gas

East Ohio promotes gas' all-time merit

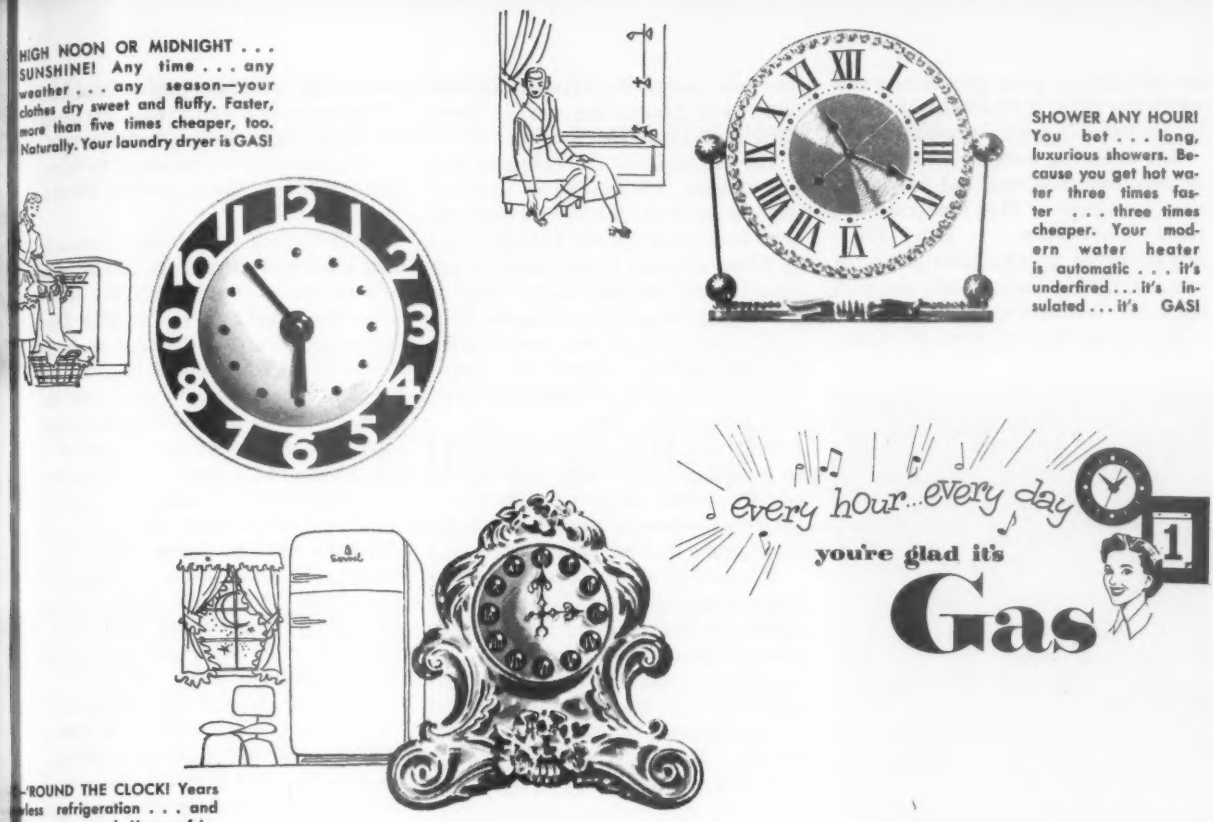
By H. E. ECKES

Director, Advertising and Publicity
The East Ohio Gas Company

● In order to guard against dilution and loss of identity of its "Every Hour . . ." promotion program, The East Ohio Gas Co. has gained copyright protection for the slogan and the logotype that are basic portions of the campaign. This step was taken to assure for gas utilities the preservation of the ideas, in all of their clearly defined merchandising intensity, through preventing their adaptation and weakening by a confusion of variations.

In addition to preventing confusion through creation of variations on the established theme, East Ohio also feels that a too limited promotion in any community—as to either intensity of impact or variety of integrated media—would prove disappointing and harmful.

The East Ohio Gas Co. is ready to extend full and free permission for the use of its copyrighted materials. Interested companies should contact East Ohio's advertising department, Cleveland.


HIGH NOON OR MIDNIGHT . . . SUNSHINE! Any time . . . any weather . . . any season—your clothes dry sweet and fluffy. Faster, more than five times cheaper, too. Naturally. Your laundry dryer is GAS!
SHOWER ANY HOUR! You bet . . . long, luxurious showers. Because you get hot water three times faster . . . three times cheaper. Your modern water heater is automatic . . . it's underfired . . . it's insulated . . . it's GAS!
every hour...every day
you're glad it's
Gas
-ROUND THE CLOCK! Years
less refrigeration . . . and
s every second. Your refrig-
has no moving parts to wear
make noise. It's GAS!

It all started with a sticker. For some time we at East Ohio had been concerned about the similarity in appearance between domestic gas and electrical appliances, as seen by the shopper. We had had in mind the use of some distinctive device that would clearly distinguish gas appliances from those of our competitor, and it seemed to us that a well-designed sticker would accomplish this purpose. We needed one that would enable an appliance-shopping housewife to spot *gas* dryers, ranges, or refrigerators at thirty feet, amidst the white enamel counterparts made by the competing industry.

We explained to our advertising agency, Ketchum, MacLeod & Grove, Inc., of Pittsburgh, what we wanted, and after we talked it over, the idea turned out to have hidden possibilities. We decided, "Let's not only tell 'em it's a gas appliance. Let's tell 'em that a gas appliance means a *good* appliance."

This made sense and the problem was approached from this angle. We did not want a statement with limited application; that would merely point out a specific, cut-and-dried, "practical" superiority. What we were after was something that would express over-all satisfaction and convenience—suggestive of general, pleasurable benefits, rather than something that hammered home a specific advantage—a slogan that would be thought-provoking, leading to self-conviction of the prospective buyer, rather than an attempt to make a self-conscious sales point. We wanted a slogan that would have smoothness, poise, cheerfulness, and confidence.

Eventually we agreed we had the copy we were looking for: "Every Hour, Every Day . . . You're Glad It's GAS." But we still needed some distintive design to round out the sticker and give it visual impact, and in working this out, it seemed natural to use a sketch of a clock dial, symbolizing the hour; and of a calendar page, indicating the day. This was integrated with the face of a bright, attractive, well-groomed young housewife, not only to give the layout a touch of charm and gladness, but to identify the source of a voice which you could almost hear singing the slogan.

With the combination, we had a smart, eye-catching slogan and symbol that proved to be an ideal logotype. Best of all, it was adaptable enough so that any or all of our domestic promotional programs could be tied to this theme. We liked it so well that an entire campaign was planned to establish it with the trade and with the public.

The goal was to make the new slogan-symbol familiar to as many people as possible in the East Ohio area, and to unify and add excitement to the company's appliance promotion. Every practicable advertising medium was used.

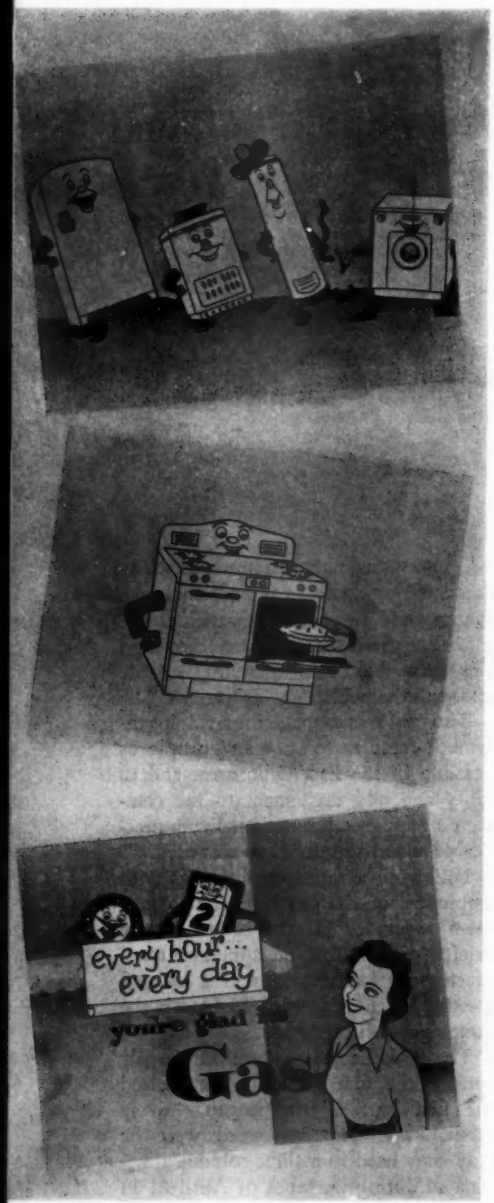
Following a series of meetings with employees of the gas company to give them a preview of the campaign, we briefed distributors and appliance manufacturers' representatives at a kick-off meeting, then proceeded to launch the campaign with teaser ads.

The clock theme was dominant, largely because the first teaser ad emphasized the first part of the slogan, "Every Hour. . . ." These two words were the only copy used in a three-column, nine-inch ad during the week of April 21 in daily and town weekly newspapers in the East Ohio area. Sketches of six different clocks, ranging from modern through cuckoo to antique, appeared in

the ad around a plain gray oblong area which was meant to be filled with a mysterious something, not yet revealed.

The following week the second three-column, nine-inch teaser ad ran in the same newspapers. This time the copy read, "Every Hour . . . Every Day," and printed on the mysterious gray block was a sketch of a wall calendar pad with the figure "1" showing.

During the week of April 26, Cleveland buses and street cars carried exterior teaser cards bearing the words, "Every Hour . . . Every Day."



Animated cartoons of gas appliances dance merrily through a gay sequence in a TV film commercial that was a part of The East Ohio Gas Company's all-out "Every Hour, Every Day . . ." promotion

The ad breaking the campaign was five columns, 17½ inches in size, and was run the week of May 5 in daily and town weekly newspapers. This ad carried all of the elements of the others, in addition to the complete slogan logotype prominently featured at the bottom. Each of the clock sketches was now adjacent to a line drawing illustrating an appliance or a convenience of gas in the home, with appropriate copy.

Copy under each of the drawings tied in with the adjacent clock by some reference to time—supper on time with a gas range—quiet, 'round the clock refrigeration—or other appropriate lead.

A second break ad appeared in newspapers during the week of May 12. Following the week of May 12 we began to make headline adaptations of the new slogan to fit specific appliances or domestic uses of gas—the slogan-symbol remaining intact, but having added copy, such as, "And No Wonder! *Your* Modern GAS Refrigerator is *thriftier* than any other. . . ."

The full layout and slogan were used on the exteriors of street cars and buses for one week beginning May 10, and all East Ohio Gas Company trucks carried the new "trade mark" for six weeks, beginning May 5. It also appeared on postcard bills mailed to gas company customers during May.

Outdoor advertising was used heavily. Billboards displayed the slogan-symbol in Cleveland in May and June, and in southern Ohio in May.

But one of the most outstanding promotions of the campaign was the television commercial, arranged for one-minute spots and for 20-second station breaks. Using top talent, this was an impressive and effective presentation, carried for 30 days, beginning May 5, over three Cleveland stations. These were "saturated" with the commercials, spotted adjacent to the most popular programs day and night. The sound portion of these commercials was recorded and broadcast over radio stations in Cleveland, Akron, Canton, Dover, Warren, Wooster and Youngstown for 30 days beginning June 2. The radio stations were also saturated.

The television film commercial featured the "Every Hour" slogan to the tune of a catchy musical jingle. This was composed by Andy Love, nationally famous jingle writer known for the one he did to promote a well known soft drink and a very popular soap powder.

The film itself was produced by Sarra, Inc., one of the country's leading TV film studios.

Both the one-minute and 20-second film versions of the commercial open with a lively dance of cartooned gas appliances (animated by a former Walt Disney studio artist) to the tune of Andy Love's jingle. In the one-minute version, the film then dissolves into a live sequence in which an attractive young lady dances in and points out features of a gas refrigerator, a range, an incinerator, a clothes dryer, and hot water heating as she pirouettes around the appliances. An announcer's voice describes the features as she points them out. The film closes with the animated appliances and the "Every Hour, Every Day" jingle. The 20-second version uses only the animation and jingle part of the film.

A special phase of the campaign was the assistance we gave dealers in taking advantage of our promotion. Merchandising aids in the form of color-printed display material bearing the new slogan and logotype were made available to all gas appliance dealers. In addition to the original stickers which started the whole business, appliance tags, large wall posters, die-cut counter cards, window decals and slugs of the logotype in one and two-column widths were distributed. Dealers were encouraged to use the slugs generously for a strong tie-in with the campaign theme.

Newspapers, whether they were included in the campaign schedule or not, were circularized with bulletins showing the logotype and offering free slugs of the new symbol. The campaign was outlined and newspapers were urged to use the logotype as an "added space selling tool" when they sold gas appliance ads or helped dealers lay out ads.

Results were more than encouraging. Several manufacturers and distributors requested stickers, to be attached to appliances leaving the factory, or as they reached sales floors.

Many dealers included the logotype in ad series, even increasing space bought so the logotype could be included. Both manufacturers and distributors requested prints of the film commercials for use in their own television advertising and film prints were made available free of charge for such purposes.

(Continued on page 48)

Modern materials, methods and practices are reflected in new gas transmission and distribution piping standards

Study piping code revision

Following a period of intensive investigation and deliberation, the gas portions of the Code for Pressure Piping, ASA B31.1-1951, are about to be released as a separate section covering gas transmission and distribution piping.

For some time it has been felt that there is a definite need for a code which will cover, in integrated form, the material, design, fabrication, installation, testing and operation of transmission and distribution piping. Much of this is covered in the B31 Code, scattered throughout Sections 2, 6 and 7. Work is now underway on revising, expanding, and modernizing these rules so that they will properly reflect the needs of safety in the light of modern materials, methods, and practices.

Operating under the procedure of the American Standards Association, sponsored by the American Society of Mechanical Engineers, and representing the American Gas Association and 36 other organizations, a new national group has been formed to undertake this work. This group is known as Subcommittee No. Eight, on Gas Transmission and Distribution Piping, of the Sectional Committee on Code for Pressure Piping, B31. Chairman of Subcommittee No. Eight is F. A. Hough, vice-president, Southern Counties Gas Co. of Calif., Los Angeles. Mr. Hough serves in this capacity by virtue of his appointment as representative of A. G. A.'s Natural Gas Department on the Sectional Committee.

The work of revising the gas portions of B31 is being done in two steps, by two separate subcommittees: First, the gas portions are being removed from B31 and consolidated in a separate document, known as "Section Eight, Gas Transmission and Distribution Piping." This work has been completed by the Sectional Committee's Subcommittee No. Two, which had originally prepared these gas portions. Section Eight, in this first version, due for release in September, 1952, will probably be in use for only a comparatively short period of time.

F. A. Hough of Southern Counties Gas Co. is chairman of the new Subcommittee No. Eight

As the second step, Section Eight, as published, will be revised and expanded by Subcommittee No. Eight. Following approval by ASA, it will be republished, probably in the Spring of 1953.

Section Eight will serve as a nationally recognized guide to the gas industry in constructing and operating new facilities. It is anticipated that it will also be adopted by reference by those government agencies which feel that there is a need for regulating these facilities, from a safety standpoint, in lieu of formulating similar rules and regulations themselves. This would be in accordance with the practice currently followed by several states which have adopted by reference the present gas portions of B31.

Subcommittee No. Eight has begun an intensive program in order to complete in the shortest possible time the revision work on the first issue of Section Eight. Two three-day meetings have been held, as well as numerous informal, exploratory conferences. Members of the Subcommittee are devoting to the work far more time than is customarily given to committee activities. The membership has been divided into working subgroups, to each of which is assigned certain subjects for study and upon which recommendations will be made for material to be included in the revision.

The membership of Subcommittee No. Eight, numbering more than fifty men, is broad and extensive, insuring that every segment of the gas and other interested industries will have a proper voice in the work. The talent which is devoting itself to this project is of such proportion that no individual company, institution, or government agency could possibly secure it for a task of this nature.

The membership includes representation from gas transmission and distribution companies; pipe, valve and fitting manufacturers; consulting engineers; universities; independent research institutions; and government agencies. Members have been appointed representing, among other groups, the American Gas Association; the Independent Natural Gas Association of America; the National Association of Railroad and Utility

Commissioners; the Cast Iron Pipe Research Association; and Battelle Memorial Institute. The Federal Power Commission has appointed a member of its staff to serve, and liaison is being effected with similarly engaged committees.

Probably the most important single decision the Subcommittee will have to make is in determining the scope of the revised Section Eight, to decide what materials, methods, and procedures should properly be included in an ASA code on gas transmission and distribution piping. To perform this work a Subgroup on Scope has been created, under Chairman John F. Eichelmann, El Paso Natural Gas Co.; the membership consists of the chairman of the other subgroups.

Walter H. Davidson, Transcontinental Gas Pipe Line Corp., Houston, is serving as chairman of a Subgroup on Construction and Operation, which is considering all construction problems which have a possible effect on the safety of finished pipe structure, such as field bending of pipe; gouging and scratches; welding procedures; construction inspection procedures; railway and highway crossings; and testing prior to operation.

A Subgroup on Compressor Stations, headed by B. T. Mast, Tennessee Gas Transmission Co., Houston, is considering those items which have an important bearing on compressor station safety, including emergency blow-downs; corrosion control within stations; crank-case explosion hazards; muffler explosion hazards; automatic pressure limiting devices; electrical installations; special vibration and temperature stress problems; compressor station building design and arrangement; automatic over-speed controls; safe operating procedures; gas treating necessary for compressor plant safety, taking into consideration the need for removing liquids, dust and sulfur compounds; and the routine internal and external inspection of compressor station equipment and piping.

Under Chairman (pro tem) C. T. Schweitzer, Southern California Gas Co., Los Angeles, a Subgroup on Design Stresses is studying and will make recommendations on the design stresses it believes should be used in pipelines, compressor stations, and in other stations forming an integral part of gas transmission and distribution systems. It will also consider the methods prescribed in B31 for computing design stresses, to determine whether or not some other method should be used. It will give special consideration to the desirability of continuing to base design stress on mill test pressure, as is done in B31 as it presently stands.

C. F. de Mey, Columbia Gas System Service Corp., New York, is head of a Subgroup on Pipe, to study the suitability, from a safety standpoint, of pipe manufactured under existing specifications and stressed in accordance with the recommendations to be made by the Subgroup on Design Stresses. If it appears that such pipe can, under certain conditions, be unsafe, this Subgroup will determine the changes in pipe properties that are necessary for safety.

American Standards Association Section Committee on Code for Pressure Piping, B 31, began work in Chicago on June 30, July 1 and 2. At speakers' table in rear, standing left to right: John F. Eichelmann, El Paso; Frank S. G. Williams, New York; Walter H. Davidson, Houston; F. A. Hough, Los Angeles; B. T. Mast, Houston; C. F. de Mey, New York and C. T. Schweitzer, Los Angeles

The chairman of the Sectional Committee on Code for Pressure Piping, B31, Frank S. G. Williams, Taylor Forge and Pipe Works, Chicago, has undertaken the chairmanship of a Subgroup on Fabricating Details and Mechanical Design. This Subgroup is concerned with all problems connected with fabrication details, such as tee connections; elbows; valves and fitting installations; hangars; supports; welding procedures involved in installations of this type; the design of hot tap connections and the inspection and testing of special designs of all types and materials used in gas transmission and distribution.

A Subgroup on Distribution, which will consider problems of gas distribution companies, from the safety standpoint, is now being organized.

Messrs. Davidson and de Mey are also serving as vice-chairmen of Subcommittee No. Eight and Mr. Schweitzer is serving as secretary.

The Subcommittee is giving careful consideration to specifications and standards presently in existence or being promulgated by other national groups, such as A. G. A., American Society for Testing Materials, American Petroleum Institute, and other professional or engineering societies, so as to avoid duplication or overlapping. If the Subcommittee considers these specifications adequate to meet the high requirements of American Standards, they will, with the approval of their respective sponsors, be incorporated by reference in Section Eight. Where specifications appear necessary but cannot, by their nature, be included in ASA codes, they will be published under the aegis of A. G. A.

By thus utilizing the work of these other groups, and because of its broad representation, Subcommittee No. Eight hopes to prepare a code on gas transmission and distribution piping which will meet with the approval of the entire gas industry; measure up to the high level of all American Standards; obviate the alleged necessity of government agencies preparing rules and regulations; and insure that the facilities of the American gas industry will be constructed and operated in the best public interest.

To indicate the broad representation on Subcommittee No. Eight, following is a list of the members:

F. A. Hough, chairman, Southern Counties Gas Co., Los Angeles

Walter H. Davidson, vice-chairman,

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Want to bet that your key men are cost conscious?
You may lose to one who finds many executives wastefully habit bound

Keep your staff cost-alert

By J. F. ROONEY

Chairman, Subcommittee on Cost Management, A. G. A. Accounting Section;
General commercial manager, Consolidated Edison Co. of N. Y., Inc.

At a recent get together of a group of utility people who were discussing cost management programs one of them said that, because of the continuing increased cost situation facing the utilities, there is a dire need for cost consciousness on the part of all supervisors as well as management.

When the feeling of blasphemy subsided—for there were those who felt that to even suggest such a thing bordered on heresy—one of the representatives related an incident that happened in his company.

The management and supervisory personnel of that company were brought together and told of a cost control program which was to become effective. After the meeting there was a rush to the accounting office for the figures and facts which were necessary for them to have. The controller of that company must have experienced that rare feeling of satisfaction that comes once in a great while by telling them that all they had to do was look in the bottom drawer of their desks or perhaps their waste paper baskets and dig it out, because they had been receiving such information for a long time.

This incident was confirmed in another instance in another company by the reaction of a group of first line supervisors to a discussion on the need for cost consciousness as a prelude to the adoption of a work simplification program. The general reaction was that it was the first time that they knew the relationship of the cost of their immediate operations to the over-all company cost picture. They requested that such meetings be held at least semi-annually and the work simplification program received an impetus that it might not have received otherwise.

It is appreciated that to suggest in even the slightest degree that anyone holding a supervisory job is not fully cost conscious is treading on very dangerous ground. But we have been around too long and remember too well instances where plain ornery cheapness was mistaken for cost consciousness. We recall too the many treks to ascertain variations in costs between companies only to wind up with a voluminous defense of our own untouchable methods.

J. F. Rooney finds the holy cow of established practices gobbling too much potential profit

Recently the manager of a customer billing operations was asked by his management why a neighboring utility's cost per bill was so much lower than his. His 10-page report, boiled down to the fact that the other utility had a much simpler bill form. He had failed to suggest, "Why don't we do the same thing?" Which leads to the question "How do we use many of the forms which we prepare day in and day out?" We are reminded of the large packing company which periodically stamps on its various forms the simple question "Is this form necessary?" This question is supplemented from time to time with the further question "If it is necessary what do you do with it?"

"But what about the regulations of the utility commission?" an executive asks in defense of a given form. Well, what about them? There isn't a commission in the 48 states that wouldn't change their rules if they could be shown that there was a better way, a simpler way, a more economical way to do the job. There is always a better way.

These are times requiring prompt action. Changes are happening fast. Many changes in addition to rate increases must be effectuated if we are to remain going concerns. Cost management programs which are a means of developing a company-wide cost consciousness can produce beneficial results if energetically pursued, *because they make people think.*

There is nothing new about cost management programs. Industrial concerns have used them for years. The belated interest on the part of some companies in the utility business is being prompted by the impact of rising labor and material

● At the Accounting Section afternoon meeting, October 28, during the A. G. A. annual convention, the Subcommittee on Cost Management Programs will present "Work Simplification." Experts on the subject will explain what it is, how the techniques of work simplification can be taught to an organization and the results attained from such programs.

costs; the difficulty of obtaining and retaining the proper type of help, and the apparent reluctance of regulatory commissions to grant rate increases readily in what they consider an inflationary period and by imposing stricter standards of operating efficiency.

Unfortunately there is no set pattern or cure-all to be offered at this time. It is doubtful if one ever will be developed that will meet the unique operating conditions each company has to face. However we can offer a definition of what a cost management program should be. It can best be described as the process of weighing benefits to be received against dollars to be spent.

Work simplification and related ideas and methods for controlling or reducing costs are a proper part of any properly coordinated cost management program. Likewise the adoption of standards of measurement to determine work performance and the comparison of such performance between companies on acceptable cost measurement basis is also a part of such programs. Because the idea is starting to catch on in the utility business the managing committee of the A. G. A. Accounting Section has set up the Sub-Committee on Cost Management Programs.

It is the present purpose of the committee to try and sell the idea of developing the need for company-wide cost consciousness by looking for leaks from the whole barrel rather than just "at the spigot." It is the purpose of the committee to present through whatever means may be available such matters as work simplification, clerical cost controls, modern time studies, benefits from job evaluations, and allied subjects. These are not a cure-all for our mounting costs of operations but they may serve as a deterrent for any company interested in trying them out. Many companies, utilities and otherwise, testify to the benefits which they have derived from the inauguration of such programs.

Years ago the so-called efficiency experts did a rather poor job by their methods of approach in showing how a job could be done more economically. Present day experts in the various fields have profited by the mistakes of the past. The human reaction to change is so accentuated in the new techniques that it presents a challenge that most people are anxious to meet.

Change is inevitable. We don't stand still: We go forward or backwards. Because a method has worked well for one, five or twenty years is no excuse for not trying to change or find a better way.

Henry Ford had a saying to the effect that any job that has been done the same way for six months should be checked to see if there is a better way to do it—if it has been done the same way for two years, it is a pretty sure bet that the method of doing the job is obsolete.

Ford's theory may not always apply but it should serve as a cue for us to stop and consider whether what we are doing is being done the best way; the easiest way; the most economical way—or better yet should we be doing it at all.

Cincinnati utility gives firm support to safety program

● The accident prevention policy of The Cincinnati Gas and Electric Co. is forcefully and succinctly stated in printed notices, posted throughout company properties, over the signature of President Walter C. Beckjord.

ACCIDENT PREVENTION

TO PROVIDE safe working conditions on the job is of paramount importance to everyone. It is therefore the policy of The Cincinnati Gas and Electric Company and The Union Light, Heat and Power Company to plan and conduct its operations in such a manner as to provide the maximum of safety to its employees and the public.

The operating departments which are responsible for carrying out this policy are expected to equip themselves with the knowledge of safe methods and to train workers in the safe way of doing each job and to see that protective devices, guards and apparel are available and used when necessary.

To further this policy and to coordinate accident prevention across the entire company, a well established Accident Prevention Division is maintained in the Industrial Relations Department.

All employees are expected to perform their work with due regard for the safety of themselves and others. Suggestions for the prevention of accidents are always welcome and should be made to supervisors. Keeping this thought in mind will contribute much to a decrease in the number of accidents.

It is also extremely important that the causes for all accidents be ascertained so that safeguards can be provided to avoid the repetition of accidents. Safety must be a continuous activity not only of our supervisors and Accident Prevention Division, but of every employee of the company.

Walter C. Beckjord
President

How to work with dealers

By LeROY G. DUYCK

Commercial and Industrial Manager Tampa Gas Co., Tampa, Fla.

A comprehensive program of appliance merchandising and dealer cooperation can be of inestimable value to an alert gas utility. Through the operation of such a plan, it is possible to maintain adequate standards of equipment, prices and terms. Properly designed and vitally pursued, it will boost public demand for gas and gas appliances, and enable the utility to extend gas sales in critical competitive markets.

At least one dealer should be enrolled in each business center of the territory the utility serves. This dealer should stock and display a full line of any one or more manufacturer's products.

Periodic dealer meetings should be held, preferably with food, at least every three months, to coordinate and encourage the operation of the plan. During these meetings the utility can assure the dealers of its sincere determination to improve its merchandising operations, to iron out problems that might arise and to get ideas from them that will help advance the sale of gas. The dealers will be spurred to greater sales effort through the discussions and the inspirational talks at these meetings.

Minor alterations, deletions and additions will fit this basic program to the needs and aims of any utility. But, once established, such a dealer cooperative plan must be followed wholeheartedly and in detail. Indifferent support of such a program will harm the utility's dealer relations.

A MODEL DEALER PLAN CAN BE FORMED AROUND 12 BASIC POLICIES

1. The gas utility should accept responsibility for gas appliance sales promotion, so that every customer or prospective customer shall have full opportunity to own and enjoy the comforts that only modern gas appliances can supply.

2. The gas utility should pioneer and promote the sale of new and improved gas appliances to the point of customer acceptance.

3. The gas utility's price, terms, trade-in allowances and all other policies should be fair to the dealers as well as to the customers. It is best to let the dealers give any special trade-in allowances.

4. The gas utility's home service department should lend assistance to the gas appliance dealers and to all gas customers, regardless of where they purchased their gas appliances. This department will help both utility and dealer public relations tremendously by following up on dealer sales and explaining to the customer the operation of a newly purchased appliance.

5. The gas utility's appliance service department should be made available for installation, service and repair, and it should endeavor at all times to perform such work to the satisfaction of customer and dealer. The charge for installation and repair work, in accordance with the utility's regular price schedule, should be made plain to the customer and to the dealer.

6. The gas utility should set up training facilities and make them available to all dealers for assistance in training their sales personnel. In this assistance to the dealers it should include any help the jobbers and manufacturers are able to give. The utility should advise the dealer to take advantage of their training programs.

7. The gas utility should keep dealers informed as to new sales opportunities offered them through new lines and new products and give them any other pertinent information. This can be done through a monthly sales bulletin.

8. The gas utility should set up a schedule of compensation for its own salesmen based upon dealers' sales. This will remove the dealer-utility competition from sales.

9. The gas utility should take the leadership in setting up sales campaigns and should develop its campaign in such a way as to stimulate the sales of the dealers as well as its own organization.

10. The gas utility should work out some type of bonus or prizes to be paid or given to the dealers and their salesmen during special campaigns.

11. The gas utility's sales promotion department should be made available to the dealer for consultation on promotional ideas and advertising.

12. The gas utility's promotional and advertising program should portray its organization and personality as a good citizen and neighbor, as a helpful friend of the community, an efficient supplier of gas service and as a leader in the local industrial development. Such advertising and public relations should also emphasize the superiority and economy of gas service and plug gas as the ideal fuel. Every advertisement of the gas utility should remind the consumer to see her gas appliance dealer. When space or time will permit, the names and addresses of the gas appliance dealers should be mentioned. The dealers should be encouraged to capitalize on the national advertising and promotional programs of the Gas Appliance Manufacturers Association and of the American Gas Association.

The supervisor: key man of free enterprise

By GORDON M. PETERSON
Assistant General Commercial Manager
Public Service Electric and Gas Co. Newark, N. J.

• The following article is one of a scheduled series of feature presentations on employee relations topics which are currently being studied by the A. G. A. Personnel Committee.

The quality of supervision may well be an important factor in the continued rise, or the fall, of our whole free enterprise system.

This concept is based on the fact that the quality of supervision is reflected both in the income statement and in the attitudes of the men and women in the organization. Are the workers in your company carefully selected, capable, industrious, and well trained? Are they individually good producers? Do they feel that they are members of a team, working harmoniously together under conditions that produce reasonable human satisfactions; and do they know why, and do they honestly believe that, the American system is the best system yet devised for the economic, social, and spiritual well-being of mankind?

If they are good producers and staunch believers in the system under which they live and work, their supervision, from foreman to company president, will be well done. When enough workers throughout the nation feel that way, the drift toward Socialism or Communism will be arrested.

American business and industrial management recognizes the vital importance of supervision in all of its aspects. Increasing attention is being given in hundreds of companies to the selection, training, and broad development of supervisory and managerial personnel, and to the performance of the supervisory staff in the entire communications and morale sphere. Recently a nationwide panel of more than one hundred industrial relations executives were asked to list the problems of most interest and concern to them in the year ahead. Their top four subjects were:

Selection of First-line Supervisors;
Executive Development;
Building Employee Morale;
Communications with Employees.

Each of these subjects involves the supervisor in a major way. In the first two he is the principal character. In the

OUTLINE INTRODUCTION OF NEW SUPERVISOR TO THE JOB

WHEN	WHAT	BY WHOM
FIRST DAY	1. Congratulate new supervisor on his appointment, and where appropriate, welcome him as a member of management.	1. Commercial Manager
	2. Present new supervisor to: a. Members of department concerned. b. Other supervisors in office.	2. Commercial Manager
	3. Discuss supervisor's general management responsibilities. a. Leadership. b. Employee relations and morale. c. Relations with higher management and other supervisors. d. Economy and efficiency, to include: (1) Need for suggested improvements in procedure. (2) Opportunities for cost reduction. (3) Control of absenteeism. e. Customer relations. (1) In person. (2) By telephone. (3) In letters. f. Training and development of employees. g. Advance planning.	3. Commercial Manager
	4. Review salary and group insurance provisions applicable to new position.	4. Commercial Manager
	5. Review remaining points on outline, indicating when and by whom they will be covered.	5. Commercial Manager
WITHIN FIRST WEEK	6. Review job requirements. a. Job specification. b. Supervisory duties and scope of authority. c. Manual of Procedure (Part IX). d. Local practices applicable to supervisory position concerned.	6. Commercial Manager or person designated by him.*
	7. Discuss Company-Union Agreement. a. Supervisor's over-all responsibilities under Agreement. b. Procedure for handling grievances. c. Relations with Union Steward. d. Keeping higher management informed.	7. Commercial Manager or person designated by him.*
	8. Explain local management meetings (where supervisor will regularly attend meetings for first time). a. Purpose and scope. b. Times and location. c. Names of those included.	8. Commercial Manager or person designated by him.*
	9. Explain nature and general plan of supervisory training (where supervisor will participate in training for first time). a. Purpose. b. Meeting schedule. c. Luncheon and travel expense. d. Application of training on the job. e. Make available for review previous conference summaries and supplementary material.	9. Commercial Manager or person designated by him.*
AT END OF FIRST WEEK AND AGAIN AT END OF FIRST MONTH†	10. Interview with supervisor. a. Determine progress. b. Clarify any misunderstanding. c. Give opportunity for questions.	10. Commercial Manager.
WITHIN FIRST MONTH	11. Discuss qualification and records of employees under the direction of the supervisor.	11. Commercial Manager or person designated by him.*
	12. Discuss value of management publications and books available through Company Library.	12. Commercial Manager or person designated by him.*

* Commercial Manager may designate Assistant Commercial Manager, Office Manager, Office Supervisor, or in the indoctrination of an assistant departmental supervisor, the departmental supervisor to cover these points.
† Further interviews may be scheduled subsequent to the end of the first month where desirable.

latter two, he plays a dual role of obvious importance: first as an employee who is individually concerned with organization morale and organization communications, and secondly as a leader who helps to make morale and communications either good or poor among the group of persons he supervises.

Having recognized the vital need for strengthening its supervisory forces, top management has adopted various types of program designed to accomplish the desired results. In principle, these programs relate to the age-old fundamentals of selection, indoctrination, job training (in both the strict and the broad sense of the supervisor's "job"), and general development for higher executive responsibilities. Because these fundamentals have long been reflected in organization activities and planning, recent and current developments are not new in principle, but merely involve new or refined methods. An example is the increasing interest in development of testing procedures to aid in the selection of supervisors. Another field is supervisory job training. Here the modern emphasis is on programs that help the supervisors meet the human relations problems of leadership, and on programs that promote effective two-way communications throughout the organization. Again, the "executive inventory" plan is a refinement of method designed to appraise managerial and supervisory performance and potential, and to point the way toward continuous development of men to assume higher executive responsibilities.

Among the many refinements of method, the many new approaches to the old problem of developing improved supervision, Public Service Electric and Gas Co. uses in its commercial department are: (a) An Outline for Introduction of the New Supervisor to the Job; (b) A Manual of Supervisory Authority. Both of these are aids to the indoctrination of new supervisors, and of supervisors advanced to higher positions. In addition, the "Manual" is helpful in continuation training.

The "Outline" is a tool for the supervisor's superior to use in helping to make sure that the supervisor is properly launched in his new position. It lists the items that should be discussed with the new supervisor, by whom they should be discussed and when. It is a systematic, orderly plan for covering what would otherwise be left pretty much either to chance, or to the initiative of the supervisor or his superior. The supervisor, even without constructive action on the part of his superior, might in time acquire, from hard experience or from written material, the equivalent of the indoctrination steps covered in the Outline. His superior might cover most of the points in discussion, at one time or another.

But if the process is left to those degrees of chance, however, the supervisor will probably make some mistakes that could have been avoided. And unless his superior is an exceptional leader, he certainly will not have the feeling that his management is strongly interested in helping him make good in his new job. The "Outline," is a constructive blueprint for the personal discussions that the manager has with the supervisor during the early days when the supervisor is taking on new responsibilities.

Stress indoctrination

As an illustration, consider the case of a man who is moved up from non-supervisory work to a supervisory position. That man's attitude cannot be safely expected to change overnight from a worker's point of view to a management point of view. The change cannot be counted on even if he is presented with a job description of his new position, supplemented by a copy of a supervisory procedure manual. If, however, his superior sits down with him on several occasions within the first few weeks and supplements, by personal discussion, the printed instructions the supervisor has received, it's the rare individual who won't gain the feeling of his new responsibilities as a member of management. This feeling will be strengthened if the supervisor receives the further new benefit of attendance at management staff meetings of his department, office or group.

The "Manual" sets forth the scope of authority, for each of the specified supervisory positions in the commercial department, with respect to each duty included in that position. The scope of authority is expressed in three clearly defined terms:

"Full"—The supervisor has full authority.

"Full—inform"—He has full authority, but must inform his superior of the action taken.

"Recommend"—He has authority only to recommend and to consult with his superior.

As an illustration, one of the duties included in the job description for supervisor of customers accounts reads as follows:

> Plan, schedule, and direct the work of other employees in the department, see that proper standards of work and departmental housekeeping are maintained, and instruct or direct instruction of employees in the detail of the operations.

This kind of statement of job duties is quite common among companies that have developed detailed job descriptions. However, it is not a complete chart by which the supervisor can steer his course, because it does not show the degree of authority he has in fulfilling his duty. For example, in planning, scheduling, and directing the work, does he have the authority to assign employees outside their job classification in event of emergency, to schedule overtime work, to increase or decrease the size of the working force? It is to meet such down-to-earth, concrete questions that the "Manual of Supervisory Authority" was developed. It spells out for a given position how far the supervisor can go. In many items he has "Full" authority. In some he can take action but must promptly inform his superior as to what he has done; in still others his authority consists solely of recommending to his superior what action should be taken.

For the job duty quoted above, as for others, the "Manual" spells out the component parts of the duty, and indicates the degree of authority the supervisor has with respect to each.

The advantages of this spelling out are numerous. In the first place, it gives the supervisor the solid feeling that he knows how far the boss expects him to go. Another group of advantages accrues to the supervisor's superior. Many managers have reluctantly faced the necessity for calling in a supervisor and saying, "John, this situation has just come to my attention. You should have told me when it began, because . . ." The sad fact is that John had not been aware that this was the kind of situation he should have reviewed with his superior; he didn't want to bother him with it, thinking that it was his responsibility alone.

These two special techniques developed by Public Service Electric and Gas

(Continued on page 44)

Kindergarten-to-college home economics kitchens by St. Charles had colored steel cabinets by that maker, Roper built-in gas ranges, Servel gas refrigerator and Whirlpool washer and gas clothes dryer

Some of the home service directors (identified, paragraph five of text) who served as hostesses to education visitors at the convention pause before the A. G. A. exhibit. Twinkling flames high in mid-air identified the exhibit from afar and caused considerable comment

America's Easiest Ranges to Keep Clean
ONE PIECE PORCELAIN FRONT FRAME
PORCELAIN ENAMEL INSIDE AND OUT
HOLD-HEAT SEAMLESS OVEN

Representatives of Caloric Stove Corp., one of the thirteen individual exhibitors of modern gas equipment at the convention, demonstrate various features of their company's ranges to visitors

Gas displays attract HEA visitors

Three thousand members of the American Home Economics Association were in attendance at the annual convention of the association in Atlantic City, June 23-27, 1952. The theme of the four-day program, "Strengthening Fundamental Values in Family Life" was carried out through the general sessions, division and department meetings.

The exhibition hall of the Atlantic City Auditorium presented exceptionally colorful exhibits devoted to new developments in equipment, foods and clothing.

Delegates spent much time in discussion with the exhibitors and observing ways in which the exhibit material could be adapted to their work with special reference to its possibilities in teaching home economics subjects.

An island exhibit—showing home service career records, approved baking utensils, information on home service television activities, and A. G. A. educational literature—was the American Gas Association's contribution to the convention.

Home service directors attending the convention served as hostesses to educational visitors. Among these (see picture) were: Katherine Rathbone, Southern Counties Gas Co., Los Angeles; Jessie McQueen, A. G. A., New York; Mrs. Ella Lambert, Milwaukee Gas Light Co.; Ruth Soule, The Brooklyn Union Gas Co.; Mrs. Winnell Simmons, Houston Natural Gas Corp.; Mrs. Helen Mandigo, The Gas Service Co., Kansas City, Mo.; Mrs. Luella Fisher, Iroquois Gas Corp., Buffalo; Vivian Marshall, New Orleans Public Service Inc.; Gertrude Berg, Milwaukee Gas Light Co.; and Mavis Lee Annett, Central Illinois Electric and Gas Co., Rockford.

Others who assisted were: Mildred

(Continued on page 39)

Thorough explanations and courteous treatment can forestall complaints or overcome customer dissatisfaction

Court good will to boost sales

By H. C. SMITH

Superintendent,
Customers Department
The Peoples Gas Light and Coke Co.
Chicago, Ill.

In these days of keen competition and extensive advertising, it is not uncommon to read that a product is "guaranteed to do exactly what we claim or your money cheerfully refunded." The magic of this confidence often makes folks automatically look for such a promise before they purchase an article or product. This expression has a certain reassuring effect on the buyer and returns under this generous offer are remarkable low.

When a customer first comes to us for service, what kind of a promise do we give him in return for prompt payment of his bills and what do we do to be sure that he will be pleased with our product and service? Does a customer have any right to expect us to be as confident of his satisfaction as does a manufacturer of the cigarettes he smokes or the producer of the razor blades he uses? To be sure, the gas business is different in many respects from others, but it is only reasonable for the customer to expect his money's worth and satisfaction with his purchase from us just as when he buys other products.

Let's take a look at Mr. Average Customer, who has come from the small town where gas service is not available and for the first time he is going to use gas, and also let's suppose he has a range, automatic water heater, refrigerator and gas heat. This is a far cry for him and his family from the inconveniences they put up with where he lived before. A new life is opening up for them in the city and when Mr. A. Customer applies for service in person or by telephone, an invaluable opportunity is presented for the company employee to start right in selling gas service and satisfaction by promising to have gas turned on when Mr. A. Customer wants it. Prompt service has no substitute in the building of good will.

The furnishing of service at the lowest possible cost to the customer is not sufficient in itself to bring about good customer relations. In every day conduct of the business there will remain many contacts which, if not properly guided, will have an adverse effect on the attitude of customers.

Efforts invested in considerate treatment of customers will pay dividends in increased sales and fewer complaints, says H. C. Smith

Careful checking of all appliances by the employee turning on the gas to be sure that efficient and satisfactory operation are assured is what the customer has a right to expect from us. Further, if any appliance needs to be replaced, let's try to sell the customer a new one. If we are not in the appliance field, see to it that Mr. A. Customer is directed to appliance dealers who will treat him so well that he will always be glad he came to the gas company for service.

It isn't enough just to turn on gas for a new customer without being sure that he knows how to use all the appliances that he has to the best advantage and with complete satisfaction and safety. Some time will need be spent in detailed explanation of all the various items which enter into the correct operation of appliances. In the long run, this time is well invested because the building up of confidence in gas service is now well on the way. It is essential that time be provided for this type of explanation. Let the customer get off on the wrong foot with an appliance strange to him and you can only expect dissatisfaction from the results he obtains. Under these conditions you can hardly expect him to be friendly toward the gas utility. It is next to impossible to meet a customer who proudly boasts of the wonderful meals she prepares on her new modern gas range and then adds that the cost of gas is too high. But let this same customer have trouble baking, have pilot outage, be plagued by the oven heat control out of proper calibration, or her range not level and almost without exception when the condition is brought to our attention with a request for correction, the item of the cost of gas will invariably get into the discussion. This is but natural for no normal human being wants to pay for something that he feels he is not getting.

As long as we have mentioned costs, suppose we talk about the first bill Mr.

A. Customer receives after his service is turned on. Care should be taken to be sure that his name on the bill is spelled correctly, that the charge is right and that the bill is mailed to the address specified by him at the time the service was requested. Special attention should be paid to customers who make inquiries about the first bills they receive to be sure that they understand the billing. This will avoid answering the same type of inquiries later.

Bill inquiries are real opportunities for a selling job of the advantages and economy of gas. It isn't just the dollars and cents deal exclusively. The customer has a right to a thorough explanation and one pretty much from his point of view. It is just good business to get your money's worth and it will require a little time to present the facts so the customer will realize that the bill in question is reasonable and fair for the service he has received. Corner cutting in bill explanations never pays off. It is a sure loser.

Give a courteous hearing

Almost as important as the explanation is the opportunity which should be given to the customer to let him have his full say. He certainly has the right to complete attention while he states his side of the story. Hear all he has to say and even if you soon discover that the "aces" are in your hand, sit tight and play your cards when it is your turn. Even though the customer may state his case apparently free from emotion, actually on the inside a tension has been built up and if this customer is to be maintained as a friend of the company, it is absolutely necessary that he have a complete, uninterrupted opportunity to "get it off his chest."

In face to face contacts on this important part of gas service, it is not always easy to get the customer to understand that dollar-wise, buying gas is one of the most economical purchases a person can make. It requires patience and real interest in the customer to do a satisfying job in bill explaining. To those who are close to similar problems each day, it is easy to look upon the answer to the customer's inquiry as obvious. However, the facts should be presented so they are understandable to the customer and be so reasonable that he can form a satisfactory opinion. Also, the answer should be in terms of the customer's language rather than in terms more or less peculiar to company procedures.

By telephone, this bill explanation job becomes a little more difficult because the customer does not have the advantage of being able to see the figures from which the company employee is getting the answer to the problem. It may sound a little bit trite but it is an established fact that success in this field is much easier and far more satisfactory if the problem is faced as the customer faces it. Try to look at this question of the amount of the bill through the customer's eyes. He has the right to expect that from us.

There is no part of gas service which requires more tact, courteous, honest attention and interest on the part of company employees than bill explaining. If bills are prepared on bi-monthly or quarterly bases, it becomes a little more difficult for the customer to remember all the various things which went on in his home through the period of the billing which have had their effects on the amount of gas used. Careful and patient questioning may help the customer to recall whether the heating plant or thermostat was set higher than usual because of sickness, or whether more than the usual amount of hot water was used because the decorators were in to beautify the home, or any number of circumstances which might have been factors in increasing the customer's use of gas. In these cases the customer has every right to expect helpful attention from company personnel.

When a customer's appliances need adjustments he is most likely to turn for help to his gas company. Here again, there is absolutely no substitute for courteous and efficient service and the customer expects it from us. In calling on a customer, it is essential that the company employee not only be qualified to handle his particular mission but also have a natural respect for the other person's feelings and possess a well-balanced sense of "the right thing at the right time."

Has a customer the right to expect free adjustment service or should a charge be made for it? There is much to be said about both sides of this question. However, he certainly should be given a complete explanation on this part of service when he first comes to us to have gas turned on. Can a change be made from a free service policy to one of charging? Yes, but a customer should be told of the change in policy and the reasons for the change. More than this, the customer has a right to expect information about the change in policy well in advance. If a charge policy is made effective, it should be one which is easy for the average customer to understand and he should be told when he requests service on appliances that there is a charge for adjustments. This information should not be withheld until the service employee arrives at the customer's home.

What kind of treatment has a customer a right to expect when he does not pay his bill for gas service which he has received? There need be no apologies made about the company being in business to make a profit, honestly and fairly, because this is traditionally the American way. However, the customer is entitled to a polite reminder that his account is delinquent. Depriving him of service should be the rock bottom, last resort. Even before the gas is turned off, an effort should be made to find out why it was not paid and perhaps a satisfactory solution can be worked out so that the company will get the money justly owed to it, the customer can continue to enjoy the benefits of gas service, and the company continue to have a customer instead of an idle meter.

Explain rates clearly

For some reason, occasionally customers get a little confused on the matter of rates for gas. Naturally, the most economical rate is desirous and the customer is entitled to have his account billed on the rate applying to his particular use of gas. However, careful thought should be given to the preparation of rate schedules so that they can be easily understood by the average customer. Lack of understanding of this important phase of the business can easily lead to suspicion, which kills confidence and good will.

Lastly, the customer has a right to expect that every employee from the chairman to the office boy is constantly alert to see that good and efficient service is available. Every employee has a stake in the good will of the customer, whether or not he ever meets the customer face to face, on the telephone or by letter. The customer's good will is one of the cheapest and easiest assets employees can create for the company, and yet, it is so easy to let opportunities for building it slip right through our fingers. Every customer's good will is important and whether he lives in the aristocratic part of the city or in that part "on the other side of the tracks," the customer has a right to expect us to be extremely desirous to serve him promptly and efficiently and economically. This isn't Utopia—it is just downright good business.

RONALD A. MALONY, *CHAIRMAN* • TERRY HART, *VICE-CHAIRMAN*

Industrial and commercial gas usage to be pushed by exhibits and breakfast programs at allied industry expositions

Active fall program announced

"Full Speed Ahead" is the order of the day for the A. G. A. Industrial and Commercial Gas Section fall program.

Of major importance to all industrial gas men will be the National Metal Congress and Exposition, Philadelphia, October 20-24, where A. G. A. will have the largest Combined Industrial Gas Exhibit in several years. Located in an "L" shaped area near the main entrance of the Commercial Museum, every visitor to this greatest of trade shows will have an opportunity to see the latest practices and techniques in industrial gas equipment and service.

An outstanding feature of the Metal Show is the traditional Industrial Gas Breakfast. Those in attendance at this year's breakfast will celebrate the 15th anniversary of this popular affair. According to custom, the breakfast will be held on Wednesday morning of Metal Show week.

In addition to being the location of the breakfast, the Penn Sheraton Hotel will be headquarters for A. G. A. Industrial and Commercial Section activities during that week. Meetings of those committees having to do with the industrial phases of the section will be held there. Details on hotel reservations appear in the *Industrial and Commercial Gas Section News Letter.*

Following immediately after the Metal Show is the A. G. A. Annual Convention in nearby Atlantic City, October 27-31. While the convention is scheduled for the entire week, the Industrial and Commercial Gas Section sessions will be held on Tuesday and Wednesday, the 28th and 29th. The Tuesday session will begin with a luncheon at the Hotel Traymore and three papers on timely subjects have been selected by the Program and Papers Committee for presentation by outstanding speakers. The chairman's annual report, the report of the nominating committee and the election of officers for 1953 will be included in this afternoon short business session.

The Industrial Division, A.G.A. Committee on Displays at National Expositions, during its meeting to allocate space at the Combined Industrial Gas Exhibit at the National Metal Congress and Exposition. Seen clockwise are: G. T. Long and A. D. Spillman, Philadelphia; A. Q. Smith, A.G.A.; L. H. Barry, New York; J. C. Dorsey, chairman, Cleveland; H. Gehnrich, J. R. Morrison and A. N. Mason, New York

Continuing a plan started in 1950, there will be a joint session with the Residential Gas Section on Wednesday morning at the Hotel Claridge. Here industrial and commercial gas will be represented by speakers with a message for the entire gas industry. This morning session has been planned to leave Wednesday afternoon free for visiting the GAMA exhibits in the giant Exhibition Hall on the boardwalk. Here the Industrial Gas Equipment Division of GAMA will have an information lounge and the products of commercial gas equipment manufacturers will be on display.

Later in the season, and of special interest to commercial gas men, will be the National Hotel Exposition in New York's Grand Central Palace, November 10-14. Here again the Industrial and Commercial Gas Section will sponsor the large Combined Commercial Gas Exhibit. Also during Hotel Show Week will be the Commercial Gas Breakfast, to be held this year on Thursday, November 13 in the Small Ballroom of the Roosevelt Hotel. As a great number of commercial gas men will be in New York for the show, there will be committee meetings on the commercial phases of our business. Later information in the *News Letter* will be specific as to meeting dates and information on hotel reservations.

(Please turn to next page)

To study and encourage commercial gas cooking promotion

A committee of sales executives has been appointed by the Managing Committee of the A. G. A. Industrial and Commercial Gas Section, to study the promotion being given commercial gas cooking by member companies, and to propose means of encouraging them to extra emphasis of commercial cooking promotion. Special backing will be urged for the Proof of Profits Sales Campaign.

Chairman R. A. Malony, following the approval by the Managing Committee of the formation of this new committee, appointed to it seven sales executives from gas companies and one from a commercial cooking equipment manufacturer. Gordon M. Jones, sales manager, United Gas Improvement Co., Philadelphia, was named chairman.

The committee will attempt to determine why so few member companies participated in the Proof of Profits Campaign this year. It will also study the need for increased effort on commercial cooking promotion in general. The sales achievements of those companies who put on local Proof of Profits Commercial Gas Cooking Campaigns will be reviewed. In support of the desirability of these extra sales efforts the committee will have records to show that the local campaigns were highly successful, with one company accounting for sales increase of nearly 500 percent in commercial gas appliances, and another company replacing 165 electric appliances which meant an estimated $12,000 additional revenue per year.

The chief objective of the committee will be to prepare a recommendation to "sell" top management on the advantage of participation in the Proof of Profits Sales Campaign in 1953 and give increased effort to the general promotion of commercial gas cooking.

Gas growth plans

(Continued from page 7)

rather than pipe facilities.

Current plans indicate that the record established in 1951 may be broken in 1953, when estimated construction expenditures total $1,681,000,000. This estimate reflects plans for major expansions of existing systems to be started in 1953, as well as one new pipeline from the Gulf Coast area to the Middle West and the initiation of a natural gas pipeline, either from Canada or the Southwest, to serve the Pacific Northwest.

Substantial completion of such projects contributes to the sustained high level of anticipated expenditures, estimated at $1,206,000,000 in 1954. Expectations for the fourth and fifth years of the period reveal decreases, though prior estimates for the more remote years have consistently understated subsequent actual expenditures.

Companies accounting for $2.1 billion of the total anticipated $5.6 billion have indicated their plans concerning financing their construction programs. These companies indicated they expected to obtain 34.6 percent of the required funds from internal sources, primarily undistributed earnings and depreciation accruals. Of the remaining 63.4 percent to be obtained from outside sources, about 46.0 percent will be realized through long term debt and 19.4 percent from common or preferred stock issues.

The actual expenditures in 1951 and projected expenditures in 1952 are based on reports submitted to A.G.A. by companies representing over 95 percent of total revenues of the industry. Forecasts beyond 1952 are the result of a special annual survey by the Association's Bureau of Statistics, among a substantial number of pipeline and large distribution companies.

North Shore makes second post-changeover rate cut

NORTH SHORE GAS CO., serving 36 communities in Northern Illinois, reduced the price of gas to local consumers on July 15. An estimated $245,000 reduction, representing about seven percent of the utility's gross revenue, was given to residential, commercial and small industrial customers after the lower rates were put into effect. On the average, the residential customer who uses 12 therms or more a month will get a reduction of $6.96 per year.

William J. Wuestenfeld, president, attributed the utility's price slash to expanding gas sales, since the conversion to natural gas in 1947. This is North Shore's second reduction since the changeover.

New distribution achievement award announced

THE INDIVIDUAL who has contributed most to the science of gas distribution will be honored at the 1952 A. G. A. Convention in Atlantic City. He will receive the new award for distinguished achievement in the field of distribution to be presented under the auspices of the A. G. A. Operating Section and through the sponsorship of American Meter Co., Philadelphia. The award will consist of a cash prize of $1,000 with an accompanying certificate and token.

The 1952 award will be given for accomplishment during the current year or for an outstanding contribution during the five years preceding the year in which the award is made. In future years the years will be dated from May 31, or such other date as the Association may adopt as a fixed date for all award periods.

Contributions on which the award is made may include a plan, design, program or any other act which adds to the safety, economy, efficiency or the service of a gas distribution system, but which shall not consist solely of the delivery of a report or paper. The ideas disclosed in papers or reports, however, might be eligible for an award.

For the purpose of the award, distribution systems are defined as all items pertaining to the system which carries manufactured, natural or mixed gas from the point of manufacture or purchase by the utility to the outlet of the customer meter. Elements considered will include design, construction, operation, maintenance, repair, renewal and safety of distribution systems. In the event that more than one individual worked on a single project considered worthy of nomination for the award, the company shall name the person whom they consider most eligible.

The award will be made under approval of the Executive Board of A. G. A. upon recommendation of a Distribution Award Committee. This committee will be made up of the chairman and vice-chairman of the Distribution Committee; the chairmen of the Corrosion Committee, the Motor Vehicles Committee, the Operating Section; and the chairmen of the subcommittees on Construction and Maintenance, Distribution, Design, and Development, and Meters and Metering. The chairman of the Distribution Committee will be the chairman of the Award Committee.

PAR research pilot plant for continuous production of base or synthesis gas from low cost coal

Pressure-gas oxygen coal gasifier

By C. G. Von FREDERSDORFF and E. J. PYRCIOCH

Institute of Gas Technology Chicago

a PAR activity

Gasification processes for converting the large available quantities of low grade solid fuels into useful gases, such as water gas and/or synthesis gas, have been under investigation for a number of years. In the majority of cases where the quality and particle size distribution of these fuels prevented their successful gasification in conventional processes, special methods were devised for converting these substances, as for example, the Lurgi pressure generator with a fixed fuel bed, and the Winkler generator using a fluidized fuel bed. The conversion of fuels too fine to be confined in either fixed bed or fluid bed operation required the relatively recent approach of suspension gasification. This system, which has been under study at the Institute for some time, consists simply of entraining the powered fuel in a gasifying medium such as an air, oxygen and steam mixture to produce a continuously flowing product of combustible gases by reaction in a suitable high temperature zone or gasifier.

The background for the present investigation on suspension gasification of pulverized coal is the prior development by the Institute of the explosion pulverizer-cyclonizer process, a method which is particularly suitable for the conditioning of coal for gasification. The explosion pulverizer, developed in 1944, employs a critical flow nozzle for the continuous comminution of coal. The cyclonizer of the pulverizer-cyclonizer combination consists of a cylindrical vortex chamber, first tested in 1945. It achieves further grinding by utilizing the kinetic energy of the pulverizer nozzle discharge. Briefly, this method of coal conditioning involves entraining coarse coal particles in a stream of compressed gas or steam and expanding this fluid through an orifice or nozzle, thereby shattering the coal granules. The resulting suspension of shattered coal in the rapidly flowing gas stream is caused to spin in the cyclonizer or vortex chamber, where the coarser particles are selectively ground by attrition. The product is then a gaseous suspension of finely pulverized coal. In addition to partial devolatilization and partial combustion of the volatile coal constituents, it is possible to preheat the coal particles and to adjust the composition of the suspending gas by the introduction of gases of various compositions and temperatures into the cyclonizer.

The present work at the Institute on oxygen-air and oxygen-air-steam gasification of pulverized coal at super-atmospheric pressures constitutes a development program sponsored by the American Gas Association under the PAR Plan to test out this process for the continuous production of gases varying in quality from producer gas to water gas and synthesis gas. The testing program was designed to include several desirable features for suspension gasification and embodied, specifically, (1) slagging conditions up to 3000°F as the most satisfactory solution for the ash problem, (2) tangential firing as a means for obtaining some degree of turbulence and relative motion between coal particles and gas stream, and (3) the use of a high oxygen, high ash, non-coking coal.

It is necessary to point out that during the initial studies of this gasification problem, the Institute has been the first to recommend an operating temperature above the fusion point of the fuel ash; in this way permitting a slagging operation in which the deposited ash is best handled in the liquid state. This procedure was in direct contrast with the then contemporary school of thought which recommended a dry-bottom operation producing entirely fly-ash. The necessity of the slagging approach has since been confirmed in several instances by other investigators who, having designed for a dry operation, have invariably had difficulties from being unprepared for fused ash deposits resulting from the high operating temperatures required in the process.

Temperatures of at least 2500°F are necessary for the rapid conversion of carbon to gas so that nearly complete gasification and a high ratio of CO to CO_2 may be attained. Due to the rapidity of the reactions occurring in the gasifier, coking coal particles are heated through their plastic range and devolatized rapidly so that particle agglomeration is held to a minimum. This, together with a high temperature slagging operation, makes it feasible to operate the process with

Abridged version of a paper presented at the A.G.A. Production and Chemical Conference, New York, May 26-28, 1952.

any type of coal.

Suspension gasification results* using a laboratory model gasifier at atmospheric pressure showed that the process could operate satisfactorily for the production of producer and water gas, but needed improvement as regards the percentage carbon converted and the thermal efficiency. It was felt that the use of pressure in effecting, say, a seven-fold increase in the inlet density of the suspended fuel bed from 0.008 lb./cu. ft. at atmospheric pressure to, say, 0.056 lb./cu. ft. at 90 psig, would prove beneficial in increasing the heat release, operating temperature and residence time for a greater carbon conversion and thermal efficiency. A pilot plant constructed under A. G. A. sponsorship for testing this process under pressure was completed early in 1951. This pilot unit was designed to process 500 lbs. of coal per hour at pressures up to 90 psig and temperatures up to 3000°F, and consists of a series of internally insulated steel vessels called the gasifier, slag pot and heat exchanger.

Gasification pilot unit

The essential features of the continuous pulverization-pressure gasification system consist of a means for (1) introducing carbonaceous material into a carrier stream of compressed air and/or steam to form a suspension, (2) conducting said air-steam-coal suspension through an explosion pulverization nozzle, (3) adding compressed oxygen to the stream issuing from the nozzle, (4) introducing the air-steam-oxygen-coal suspension and additional superheated steam separately into a high temperature vortex chamber or cyclonizer wherein, with attendant softening, preheating and partial devolatilization and partial combustion accelerate the further degradation of the coal particles, and (5) passing the fine, partially reacted coal particles into a cylindrical reaction chamber in which the carbonaceous material is gasified in suspension.

The equipment, instrumentation and flow employed in the pilot plant study of pressure coal gasification are depicted in Figure 1. Coal supply in hopper A is transferred by spiral conveyor B to bucket elevator C, from which it is discharged by means of a second spiral conveyor leading to swing hammermill D. A dust-tight, flanged-bottom connection on the swing hammermill permits the coarsely pulverized coal (approximately 20 mesh) to flow into the top of a 10-ton coal storage bin E which is equipped with high and low level indicators and alarms. Coal is transferred from this storage bin to the feed pressure chamber H by lowering the movable sleeve G separating the two vessels, and opening slide valve F and coal valve I. Feed screw K, driven at controlled speed by variable drive J, transfers the coal charge at a known rate, as indicated by hopper scale L, to a carrier stream of compressed air and steam. The air-steam-coal suspension transmitted through explosion nozzle M is introduced tangentially into the cyclonizer portion of the gasification unit O. Oxygen is normally added through a series of jets directed into the center of the top of the reactor. Simultaneously, superheated reaction steam from heat exchanger Q is admitted tangentially to the cyclonizer, thus forming a thorough mixture of air, oxygen, superheated steam and coal.

The partially reacted, superheated air-oxygen-steam-coal mixture leaving the outlet constriction of the cyclonizer is conducted downward through the cylindrical reaction zone of the gasification unit, wherein the coal particles are gasified in suspension at temperatures normally above the fusion point of the coal ash if oxygen enrichment is used. Some unreacted carbon and slagged ash is deposited in slag catchpot P and dust catchpot S, at which point the partially cleaned make gas is cooled by indirect transfer with an alloy steel pipe coal in heat exchanger Q. Saturated steam is superheated in the pipe coil to approximately 1500°F and is introduced tangentially into the cyclonizer through a short insulated connection. Accumulations of ash, slag and some unreacted carbon are removed periodically from the catchpots through the provided openings.

The partially cooled make gas leaving near the top of the heat exchanger vessel is quenched under pressure by spray cooling in the off-take pipe T to a temperature of approximately 350°F. Additional cleaning of the gas under operating pressure is obtained in a water scrubbed cyclone U. The make gas pressure is then reduced to essentially atmospheric conditions by the throttling action of a butterfly control valve V, actuated by the reactor pressure through a pressure recorder and controller. The gas is then directed tangentially into a cyclone scrubbing tower W, in which the vaporized quench water is condensed and a large portion of the remaining dust precipitated by the centrifugal action in this vessel. A portion of the water and dust entrainment escaping with the make gas is removed in an atmospheric water sprayed cyclone X. Discharge of the scrubbing water from the bottom of tower W is accomplished by a throttling type liquid level controller Y, while provision is also made for quick manual blow-down of sludge accumulations in the collecting leg of the scrubbing tower.

Upon condensing, cooling and scrubbing, the main gas stream is metered by orifice meter Z (for instantaneous flow rate) and by rotary displacement meter AA (for total gas flow). The gas stream is continuously sampled and portions are sent to a sample holder, Ranarex specific gravity recorder and Cutler-Hammer type AB recording calorimeter.

The instrumentation of the gasification unit consists in part of flow recorders and controllers on the oxygen and reaction steam streams, orifice meters for measuring the flow of the pulverizing air and steam, a temperature recorder and millivolt pyrometer for various thermocouples, an optical pyrometer for gasification temperatures, a pressure controller for regulating and recording gasification pressures, and various safety devices.

Gasification results

A series of some 20 successful runs, many of eight hours duration and longer, were made to explore the effects of oxygen enrichment, oxygen-coal ratio and gasification pressure on the gas heating value and conversion efficiency of the process. Using a high volatile C Illinois No. 6 seam bituminous coal containing approximately 8% ash, a range of pressures from two to five atmospheres, oxygen-coal ratios from 0.7 to 1.0 lb./lb. and oxygen concentrations from 21 to 70% were explored.

Tests using 90% oxygen enrichment are in progress at the present time. Series of successive tests were usually made by holding a constant flow rate of reactants and increasing the pressure. With the coal feed arbitrarily set at slightly above the design value of 500 lb./hr., a gasification rate of 50 lb. coal gasified per hour per cu. ft. reactor volume was achieved. This does not repre-

*Continuous Gasification of Powdered Coal Suspensions by Air-Oxygen and Air-Oxygen-Steam Mixtures. Proc. AGA 1949, pp. 705-724.

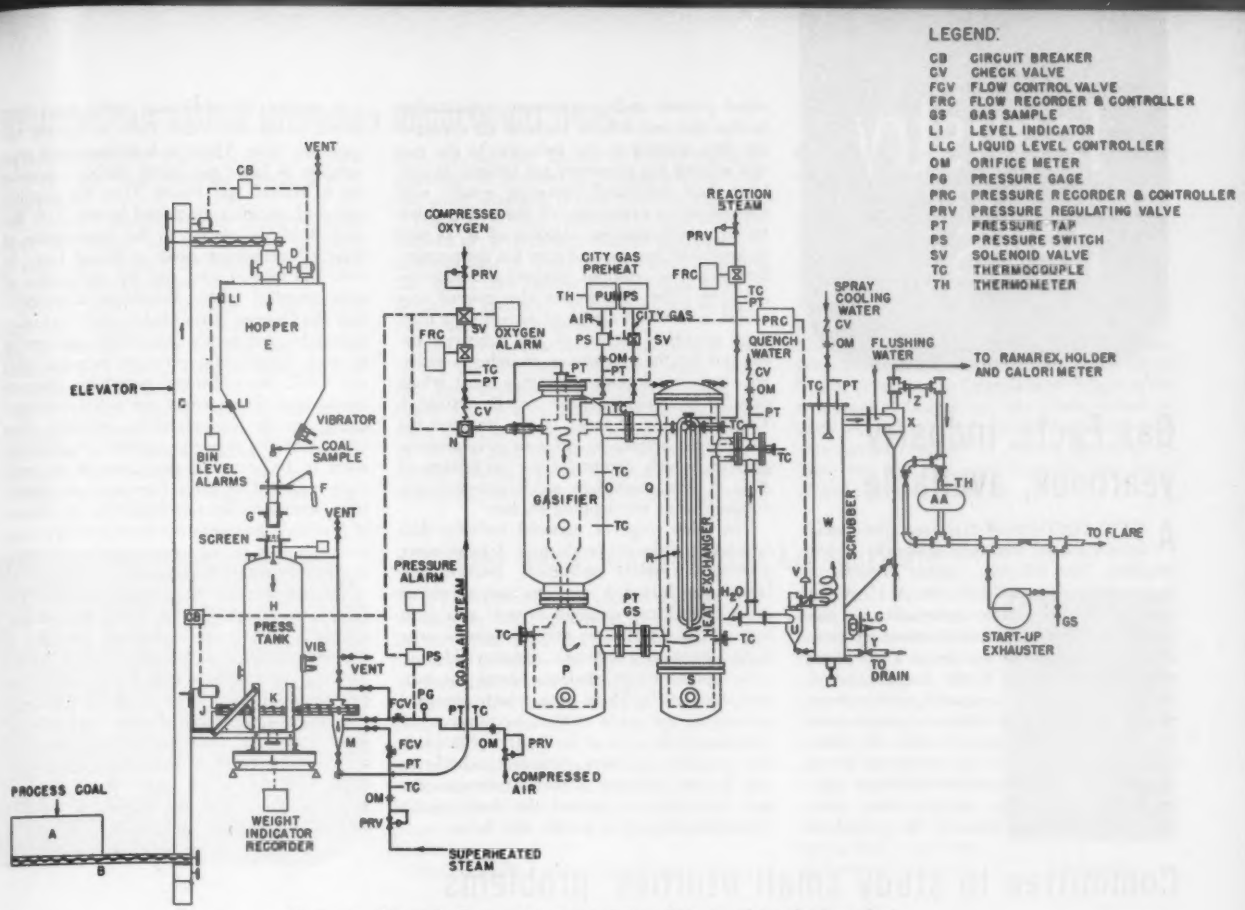

Figure 1. Schematic flow and instrumentation diagram of gasification plant

sent the maximum capacity of the gasifier, however, and indications are that up to 100 lb. coal per hour/cu. ft. may be converted successfully at five atmospheres.

The quantity of slagged ash obtained when gasifying at slagging temperatures depended primarily on the final gasification temperature and the amount of excess carbon present in the exit gases. The final gasification temperature and excess carbon in turn depended primarily on the oxygen-coal ratio and oxygen concentration, and to a lesser extent on the steam-coal ratio. The tests indicated that no slag resulted when gasifying with unpreheated air-steam mixtures and very little with 30% oxygen enrichment. However, with 50 and 70% oxygen concentration, using oxygen-coal ratios *above 0.80 lb./lb.* and a steam-coal ratio of 1.0 lb./lb., a completely fused, sandy colored ash residue containing about 1% carbon was obtained.

Visual inspection of the refractory linings after some 200 operating hours under mild to severe slagging conditions up to 3000°F showed no evidence of failure of the zirconium silicate gasifier brickwork. However, some thermal spalling occurred in the upper castable grog lining of the slag catchpot.

The tests with 50 and 70% oxygen concentration used a 5/16 inch explosion pulverization nozzle operating at approximately critical flow conditions. This nozzle reduced a —20 mesh hammermill pulverized coal to a product containing about 80%—100 mesh size. The introduction of the nozzle coal suspension tangentially into the top cyclone section of the reactor and mixing it with the tangential flow of the superheated process steam caused no evidence of erosion in the upper zirconium silicate lining. To avoid slag deposits in the upper zone of the gasifier it was necessary to introduce the oxygen for partial combustion through water-cooled down-flow jets directed toward the central outlet of the cyclonizer section.

Operating results show that gases containing up to 75% $CO + H_2$ can be obtained when the oxygen concentration of the gasifying medium is 70% on the steam-free basis. *Optimum results* at 5 atmospheres generator pressure with Illinois coal and 70% oxygen occurred when the oxygen-coal ratio was between 0.80 and 0.85 lb./lb. yielding a gas containing upwards of 70% combustibles, gasifying more than 90% of the carbon in the coal at a thermal conversion efficiency of 70% and higher on the cold gas basis. Steam decomposition based on the total steam present as added process steam and as moisture and hydrogen in the coal was upwards of 50%, corresponding to approximately 0.35 lb. added steam decomposed per lb. coal. To obtain one MCF of $CO + H_2$ at an average of 90% carbon gasification with 70% oxygen concentration it was necessary to use 33.5 lb. coal (75% ultimate carbon content), 34 lb. steam and 330 cu. ft. oxygen distributed as 197 cu. ft. air and 288 cu. ft. pure oxygen. The requirements per MCF of $CO + H_2$ when using 50% oxygen were somewhat higher. The anticipated optimum results for gasification with 90% oxygen concentration based on an interpolation of the present data are 33 lb. coal, 35 lb.

(Continued on page 46)

Industry news

Gas Facts, industry yearbook, available

A NEW EDITION of *Gas Facts*, the Association's annual statistical yearbook, is now available. The 261-page volume presents industry statistics compiled by the A. G. A. Bureau of Statistics from questionnaires submitted by it to companies representing virtually all operations of the nation's gas utility and pipeline industry. In the case of basic operating data (such as customers, sales and revenues) the responding utilities represent about 95 percent of the industry, while for other items the proportion is slightly lower. In addition to the tabulations derived from questionnaires, the volume includes other pertinent information developed by the A. G. A. or other private and government organizations so that this one volume contains all appropriate data relating to the industry. In the past this volume has permitted gas utilities to contrast their individual operating results with the composite experience of the entire industry or a homogeneous segment of it, as well as providing background data for the preparation of public relations material and advertising copy. The volume has also proved very useful in financial circles as providing a thorough statistical picture of the industry's operations for the preparation of industry analyses, or as a composite pattern against which data for individual utilities may be evaluated. The availability of many of the statistics has also proved helpful to different governmental agencies, which, except for the availability of A. G. A. data, might have conducted their own duplicating or overlapping studies.

The wide scope of material includes data on energy reserves, production, transmission, distribution, sales, utilization, finance, and labor. Also included are Canadian, Hawaiian and Puerto Rican statistics as well as a glossary of gas terms. The current volume once again contains composite industrywide income statements and balance sheets for each year since 1937. These data, which appeared initially in last year's edition, have proved of such interest to users of A. G. A. statistics that this program has been enlarged recently so that interim industry income statements are now published as part of the Association's "Quarterly Report of Utility Gas Sales."

A number of additional tables have been added to the 1951 *Gas Facts* to further enhance its value. These include the initial presentation of basic gas utility statistics pertaining to Hawaii and Puerto Rico; the re-publication of statistics developed by the U. S. Bureau of Mines relating to the consumption of liquefied petroleum gases in liquid form, by state and type of use; and the publication of data compiled by the Petroleum Administration for Defense pertaining to steel and other materials used by the gas utility industry in its vast construction program between 1949 and 1951. An additional new table contrasts the number of residential gas utility customers using gas for househeating, annually since 1949, with the expected number of additional users to be served during each of the next three years. The latter forecasts are derived from annual studies undertaken by the Bureau of Statistics, primarily for the use of appliance manufacturers in organizing production plans and establishing sales quotas.

The volume has been prepared under the general sponsorship of the Committee on Economics and the more immediate direction of the Subcommittee on Statistics. These groups, deriving their membership from a cross section of companies in the industry, have been responsible for policy decisions regarding the type of material collected and published and the general methods of presentation employed. Copies of *Gas Facts* may be obtained at $1.00 per copy from the Bureau of Statistics at A. G. A. Headquarters, New York.

Committee to study small utilities' problems

A NEW COMMITTEE on Special Problems of Smaller Gas Companies has been appointed to review Association activities and recommend changes to benefit small gas utilities. It will serve as a representative committee to see that the interests of companies employing fewer than 500 persons are recognized at A. G. A.

W. Lee Woodward, president, Zenith Gas Co., Inc., Alva, Okla., is serving as chairman. Other executives who are members of the committee include: R. E. Crawford, president, Minnesota Valley Natural Gas Co.; F. P. Dicus, president, The Nebraska Natural Gas Co.; C. J. Dodds, vice-president, Kansas Public Service Co., Inc.; David H. Frazier, Jr., president, Battle Creek Gas Co.; Edward M. Hahn, president, Kokomo Gas & Fuel Co.; and Hansell Hillyer, president, South Atlantic Gas Company.

Other committee members are: J. H. Isherwood, vice-president and general manager, North Penn Gas Co.; Stewart Matthews, president, Bellingham Gas Co.; Stephen V. O'Lenic, president, Chattanooga Gas Co.; E. F. Putnam, president, The Greenwich Gas Co.; W. W. Rusk, Clayton Gas Co.; and A. H. Stack, president, The Tampa Gas Company. Also, Carl M. Stephens, president, Council Bluffs Gas Co.; Thomas H. Sykes, executive vice-president, Suffolk Gas Corp.; and John A. Weiser, executive vice-president, The Newport Gas Light Company. Thomas J. Shanley, A. G. A. Headquarters, is secretary of the new committee.

Training schools for service men; sales and promotion; insurance, and public relations were a few of the subjects considered at the initial meeting of the committee on August 15. Other problems explored included rate forms, labor problems and wage rates, and proper representation on A. G. A. committees.

A. G. A. announces new publications

LISTED HERE are publications released by American Gas Association during July and August, up to closing time of this issue of the MONTHLY. Information in parentheses indicates audiences for which each publication is designed.

Laboratories

● **Study of Burner Flexibility on Base and Peak Load Gases,** A. G. A. Laboratories Research Report No. 1192, for all gas companies involved in changeovers, or having base and peak load send-out problems; and for appliance burner designers. By E. J. Weber, sponsored by Committee on Domestic Gas Research. Available from A. G. A. Laboratories or New York Headquarters, for 75 cents.

Rate

● **Interruptible, Off-Peak and Seasonal Gas Rates** (for all interested in the study of service provisions, rules and regulations, general terms and conditions and contract provisions under which service is supplied. Also for those concerned with regulatory concepts, rate aspects, load considerations, line extension contributions and interruptibility considerations). Prepared by the Rate Committee and available from A. G. A. Headquarters, for $1.00 (members) or $2.00 (non-members).

Research

● **Interchangeability of Oil Gas and Natural Gas.** Institute of Gas Technology Interim Report (for those companies which have or are going to change over to natural gas). Prepared by D. L. Nicol, R. A. Brown, H. R. Linden. Available from A. G. A. Headquarters and from IGT for $2.50.

● **Comparative Performance of a Warm-Air Ceiling Panel System and a Convection System**—University of Illinois Experiment Station Bulletin 401 (for utilization departments of gas companies; manufacturers of heat equipment and equipment installers). Available from A. G. A. Headquarters, $.80.

Statistics

● **Monthly Bulletin of Utility Gas Sales**—June (for sales managers, statisticians, banks, investment houses, newspapers and appliance manufacturers). Available from A. G. A. Bureau of Statistics, free.

Personal and otherwise

Metropolitan utility promotes department heads

CONSOLIDATED EDISON CO. of New York, Inc. has promoted several department heads.

R. Frank Brower, system engineer since 1940, was elected an assistant vice-president to work with Leland B. Bonnett, vice-president in charge of engineering.

Otto W. Manz, Jr., manager of the system operating department, also was elected to the post of assistant vice-president, and will be associated with Earl L. Griffith, vice-president in charge of construction.

M. LeCompte Waring, assistant vice-president, has been transferred from Mr. Griffith's department to Westchester County, where he will assist Vice-President L. A. Scofield.

Walter B. Fisk, Jr., formerly planning engineer, succeeds Mr. Brower as system engineer. Theodore D. Reimers, Jr., formerly assistant inside plant engineer, is now planning engineer.

Harry C. Otten, formerly general superintendent of Westchester County operations, is now manager of system operations, succeeding Mr. Manz. His former post is being filled by Donald S. Kennedy, who has served as assistant general superintendent.

The two new assistant vice-presidents have served Consolidated Edison for many years. Mr. Brower began in 1920 as a tester, the lowest job on the company's technical ladder. Since then, he has served as assistant engineer in the test and engineering departments, executive assistant, assistant system engineer and system engineer. Mr. Brower was graduated from Duke University and studied electrical engineering at Columbia University.

Mr. Manz joined the utility in 1925 as an engineering assistant. He specialized in field test work until 1940, when he joined the production department. During World War II, shortly after being assigned to the utility's executive development program, he assisted in building and operating the electric generating plant at Oak Ridge, Tenn., as part of the Manhattan Project to produce the first atom bomb. Returning to Consolidated Edison after two years at Oak Ridge, Mr. Manz served as assistant manager of system operation, and was named manager of system operation in 1950. He was graduated from the University of Pennsylvania in 1923.

Strickler heads Kansas City Art Institute

T. J. STRICKLER, vice-president of the Kansas City, Mo., operations of The Gas Service Co., has been elected chairman of the board of governors of the Kansas City Art Institute and School of Design.

Mr. Strickler has been active in many civic affairs in Kansas City, including presidency of the War Chest, Inc. and general chairman of the Kansas City Charities Campaign.

He has also served as vice-president of the Kansas City Conservatory of Music and vice-president of the Kansas City Chamber of Commerce.

Mr. Strickler, active in the gas industry, served as president of American Gas Association in 1941. This year he is a member of the Natural Gas Department's Advisory Committee and the Operating Section's Managing Committee.

He is a former director of the U. S. Chamber of Commerce and a graduate of Kansas University.

T. J. Strickler

Feted on silver anniversary

FREDERIC O. HESS, president of Selas Corp. of America, was the guest of honor recently at a dinner celebrating the 25th anniversary of his association with the corporation.

Almost 300 employees and friends attended the event, at which Mr. Hess was presented with a silver coffee service and a set of aluminum luggage.

Mr. Hess, active in GAMA and A. G. A., is a prominent industry leader. This year he serves as an A. G. A. director, a member of the Executive Committee of the Board and the Industrial and Commercial Gas Research Committee.

Baxter lauded at dinner in Arkansas

AT A TESTIMONIAL dinner held in Fayetteville, 250 friends honored L. L. Baxter, president of Arkansas Western Gas Co., for his service to the area and to the state.

Mr. Baxter came to northwest Arkansas as district manager for the utility, when the company was serving about 1,700 customers. Today, under his leadership, it serves over 25,000 customers and is expanding rapidly. Mr. Baxter was elected vice-president in 1940 and president in 1943. Largely because of his efforts, the utility has one of the best employee welfare plans in the industry.

Mr. Baxter is a director of American Gas Association, and has served on various committees for many years. He is a director and past-president of Southern Gas Association, a director of the Arkansas Resources and Development Commission, a director of the Economic Council of the State Chamber of Commerce, and chairman of the Chamber's Taxation Advisory Committee.

L. L. Baxter

Columbia promotes Overbeck

JOHN E. OVERBECK has been elected an assistant vice-president of the Columbia Gas System Service Corporation.

Mr. Overbeck has been associated with the Columbia Gas System for 35 years. From 1916 to 1928 he worked for The Ohio Fuel Gas Co., and since that time, has been with the service organization. At the time of his latest promotion, he was supervisory engineer in charge of the corporation's gas measuring department.

Mr. Overbeck is a member of American Gas Association. He is currently serving on two Natural Gas Department committees, the Technical and Research Committee's Gas Measurement Sub-Committee and the Joint A. G. A.-ASME Orifice Meter Subcommittee.

Cuthrell president of L. I. College Hospital

HUGH H. CUTHRELL, president of The Brooklyn Union Gas Co. and former president of American Gas Association, has been elected president of Long Island College Hospital.

Mr. Cuthrell has been active in Brooklyn community affairs since 1922. He is vice-president of the Brooklyn Chamber of Commerce, a member of the Queensboro Chamber of Commerce and of the Merchants and Manufacturers Association.

He has headed fund raising activities for such varied groups as the Savings Bond Drive, Brooklyn Cancer Committee, Greater New York Fund, and others.

Mr. Cuthrell is a national figure in the utility industry. One of his important responsibilities was the presidency of Gas Exhibits, Inc., which was responsible for the gas industry exhibit at the New York Worlds Fair. He is chairman of the New York State Utilities Executives Conference, 1952.

H. H. Cuthrell

Active in A. G. A. programs, Mr. Cuthrell is serving this year as a member of the PAR Committee and the Advisory Council.

OBITUARY

Ralph W. Gallagher

Ralph W. Gallagher

prominent leader in the oil and gas industries and former president of A. G. A., died on July 31 in New York City at the age of 71.

At the time of his retirement in 1944, Mr. Gallagher had completed 48 years with Standard Oil Co. of New Jersey and its subsidiaries. In these years he had risen from machinery oiler and sweeper to chairman of the board and president. He was also a director of J. P. Morgan & Co. and the W. T. Grant Company.

He had served as a director of Standard Oil since 1933, and was head of the company during World War II when the principal problem was to insure an adequate petroleum supply to the United States and its allies.

Throughout his career, he devoted much of his time and energy to employee welfare, and his advice on these matters was sought throughout the industry. Many existing personnel plans and employee benefit systems were the result of his efforts.

Mr. Gallagher was compelled to start work after the death of his father, without finishing his high school education. His first job was at a pumping station in Olean, N. Y., where he swept floors and oiled machines for the New York Transit Co., a Standard Oil subsidiary.

He continued his education at night, studying engineering. In 1900 he joined The East Ohio Gas Co., which was building natural gas pipelines from West Virginia. Within six years he was in charge of the company's pipeline construction, and in another two was appointed supervisor of all company properties.

In 1926 he was named president of East Ohio, and in 1937 was elected a vice-president of Standard Oil. He was named chairman of the board and president of Standard Oil in 1942, the position he held until 1944, when he relinquished the presidency to Eugene Holman.

Active in Association work, Mr. Gallagher was elected A.G.A. president in 1931, after playing a leading role in the establishment of the Association's Testing Laboratories. Upon his suggestion, Cleveland was selected as the site, because of the city's location in the heart of the gas appliance manufacturing territory, and also because of the availability of several types of gases.

As first chairman of the Laboratories Managing Committee in 1924, and from 1926 to 1930, Mr. Gallagher crystallized the myriad of ideas contributed by executives from every segment of the industry. During his tenure, he established the basic policies and objectives which have guided the Laboratories throughout the years.

He also served as A.G.A. director from 1926 to 1935, as vice-president in 1930 and 1931, and as a member of the Advisory Council from 1935 to 1939. He was a director of the Natural Gas Association of America for several years and was president during 1926.

Surviving Mr. Gallagher are his son and three daughters. His wife, Mrs. Mary E. Gallagher, died in 1938.

William N. Grinstead

W. N. Grinstead

president of the Ohio Fuel Gas Co., died on August 2 at the age of 52. At the time of his death, he was recuperating from a month-long illness in Asheville, North Carolina.

Mr. Grinstead had spent his entire business career in the utilities field. After attending Milligan College in Tennesse he joined the Appalachian Electric Power Co. and later the Mountain Service Corporation.

He became affiliated with the Columbia Gas System Service Corp., Pittsburgh, in 1929, and a year later was transferred to Binghamton, N. Y., as treasurer of Columbia System companies with headquarters there.

In 1939, Mr. Grinstead joined Ohio Fuel as treasurer and member of the board. He was elected vice-president in 1947 and became general manager three years later. On May 23, 1951 he was named president, succeeding E. C. Overbeck, who became chairman of the board.

A member of American Gas Association, Mr. Grinstead had been a member of the Committee of Executives on Taxation.

He is survived by his wife, four sons and a daughter.

Alfred E. Forstall

leader in gas industry activities and well-known engineering consultant in the public utilities field, died at his home in Montclair, N. J. on July 2. Mr. Forstall had been president of the American Gas Institute from 1916 to 1917, and was a member of American Gas Association, American Society of Mechanical Engineers and the Society of Gas Lighting.

Brother of Walton Forstall, who died on March 1, 1952 (see April MONTHLY), Mr. Forstall was born in New Orleans in 1864. He was graduated from Lehigh University with an engineering degree in 1883, and received a post-graduate degree in chemistry in 1884.

For four years he served the Chicago Gas Light Co. as construction superintendent and in 1889 was named assistant engineer of Chicago Gas Light & Coke Company. From 1890 to 1897 he was general superintendent of the Newark Gas Light Co. and later served as general manager of the Montclair Gas & Water Company.

In 1899, he became a consulting engineer, and worked in that capacity until his death. During World War I, he was a member of the National Commission on Gas & Electric Service, which supervised the function of gas and electric companies.

During his long tenure as a consulting engineer, Mr. Forstall was selected often by Public Service Boards to represent gas companies, municipalities and states. He also served during investigations by the Interstate Commerce Commission.

Albert Barnett Paterson

Albert B. Paterson

chairman of the board, New Orleans Public Service, Inc., died on August 6 at the age of 69 in New Orleans.

A native of Canada, and a graduate of the College of Commerce in Toronto, Mr. Paterson entered the utility field in 1905, when he joined the Meridian Mississippi Light and Railroad Company. In 1920 he was appointed advisory engineer for the New Orleans Railway and Light Company. Two years later, when New Orleans Public Service Inc. was formed, Mr. Paterson was named vice-president and general manager. In 1930, he was elected president of the utility, the position he held until 1951, when he was appointed chairman of the board.

Mr. Paterson had been active in Edison Electric Institute and American Gas Association for many years. He was serving this year as a member of the EEI board of trustees, the A.G.A. Promotion, Advertising and Research (PAR) Committee and the PAR Review Committee. Mr. Paterson was also a director of Middle South Utilities, Inc.

He is survived by his wife, Annie Evans Brown Paterson; a son, Albert Brown Paterson; two daughters, Mrs. Eugene Contiss and Mrs. John Mills.

Buchanan takes oath as FPC chairman

THOMAS C. BUCHANAN has been appointed chairman of the Federal Power Commission by President Truman. He took oath of office on July 9, as a commission member with an interim appointment.

Mr. Buchanan served as chairman of the commission from January 1952 until the expiration of his term in June. He has been a member of the commission since July 1948, and served as vice-chairman from May 1950 until the end of 1951.

An alumnus of Washington and Jefferson College, he was admitted to the Pennsylvania Bar in 1922. A member also of the American Bar Association, Mr. Buchanan served on the Pennsylvania Public Utility Commission from 1937 to 1945 and on the Public Service Commission in 1936 and 1937.

Home service girls go to school

HOME SERVICE directors from 16 eastern gas companies enrolled in a week's course given this summer by the home economics department of Pennsylvania State College. The course, "Professional Seminar in Consumer Services," was in charge of Mary Brown Allgood, chairman of the Commercial Consumer Services Division.

Co-sponsors of the seminar were the Pennsylvania Gas Association and the Pennsylvania Natural Gas Men's Association.

Among the subjects presented by manufacturer representatives, magazines and industry people were: Gas—The Fuel; The Relationships of Home Service to Sales; Research in Kitchen Design; The Contribution of Industry to Kitchen Planning; Gas Range Controls and Their Relation to Baking Results; Outstanding Gas Range Features; What the Homemaker Expects from a Range; Gas Incinerator Research; Effective Demonstration Techniques; Modern Gas Refrigeration; The Water Heater Story; The Results of Research Conducted on Detergents and Washers; The Gas Dryer.

Members of the Program Committee were: Kathryn Barnes, Equitable Gas Co., Pittsburgh; Flora G. Dowler, The Manufacturers Light & Heat Co., Pittsburgh; Beatrice Cole Wagner, The Philadelphia Gas Works Co.; Dr. Helen LeBaron, assistant dean, School of Home Economics; and Mary Brown Allgood, chairman, School of Home Economics.

Home service directors who attended the seminar represented Allentown-Bethlehem (Pa.) Gas Co.; Binghamton (N. Y.) Gas Works; Consumers Gas Co., Reading; Consolidated Gas Electric Light & Power Co., Baltimore; Equitable Gas Co., Pittsburgh; The Harrisburg Gas Co., Harrisburg; Keystone Gas Co., Olean, N. Y.; Lancaster County Gas Co.; The Manufacturers Light & Heat Co., Pittsburgh; Natural Gas Co. of West Virginia, Salem, Ohio; The Ohio Fuel Gas Co., Columbus; The Peoples Natural Gas Co., Indiana, Pa.; The Philadelphia Gas Works Co.; Scranton-Springbrook Water Service Co.; South Jersey Gas Co., Atlantic City; and United Fuel Gas Co., Charleston, West Virginia.

Home economics convention

(Continued from page 28)

Clark and Laverna Best, Oklahoma Natural Gas Co.; Wanda Ewing, United Fuel Gas Corp., Charleston, W. Va.; Flora G. Dowler and Margaret Easley, The Manufacturers Light & Heat Co., Pittsburgh; Marea Bordt, Tampa Gas Co.; Frieda Barth, Michigan Consolidated Gas Co., Detroit; Ruth Severson, The Peoples Natural Gas Co., Pittsburgh; Ruth Sheldon, Washington Gas Light Co.; Sarah Sicker, South Jersey Gas Co., Atlantic City; Irene L. Muntz, Rochester Gas & Electric Corp.; and Eleanor Morrison, Michigan Consolidated Gas Co., Grand Rapids.

Individual exhibitors of modern gas equipment at the Atlantic City Convention included: Caloric Stove Corp.; Chambers Corp.; Cribben & Sexton Co.; Hamilton Mfg. Co.; Hardwick Stove Co.; Harper-Wyman Co.; Perfection Stove Co.; Geo. D. Roper Corp.; Servel, Inc.; The Tappan Stove Co.; Thor Corp.; and Whirlpool Corporation.

In addition four manufacturers of cabinets cooperating in New Freedom Gas Kitchen displays were: Lyon Metal Products, Inc.; Mutschler Bros. Co.; St. Charles Manufacturing Co., and Toledo Desk and Fixture Company.

Promotion

(Continued from page 15)

dealers in Servel gas refrigerators have always been invited to join in the promotion; those who did participate wholeheartedly have enjoyed commensurate returns.

Retail sales, by the utility and by outside dealers, rose 25.6 percent between May 15 and June 1, 1952, as compared to 1951, when no offer was in effect. Similarly, the month of June saw a 79.6 percent increase in sales, and July 1 to July 29, 1952, was 131 percent over the same period of last year, when no offer was made.

The 25.6 percent sales increase of the May 15 to June 1 period was due largely to prospects who, being thoroughly satisfied, completed purchases before the expiration of their 60-day limit. Similarly, the cumulative effect of the program is notable in even greater increase of the month of July. The first 60-day trial use period expired July 15, and the effect of the trial offer is notable in the spectacular sales increases recorded for the month.

During the first two periods, i.e., May 15 to June 1, and June 1 to July 1, outside dealer sales were lower in percentage of total for the entire area. It was their aroused interest that caused their July sales to be higher than during July, 1951.

The present offer is a repetition of the first one announced eleven years ago. Rarely does any unvarying promotion have such a long record of continued success.

The schools play two or three days in each town. The two troupes are on the road from September to December and again from February to May.

In most towns the local newspaper sponsors the schools' visit. Merchants supply scores of door prizes and a gas range and dryer are given away through the joint cooperation of the dealers, distributors and manufacturers.

From three to four months of production effort goes into each new show. It is conceived, written, designed and tried out in the general office of the home service department. The company's dealer promotion department arranges for bookings and lines-up sponsors, prize-donors and dealer participants. The kitchen, new each season, is designed by the home service department's kitchen design specialist and built in the business promotion department's display shop.

A central theme is woven into each performance. The 1953 school has "United Tastes of America" as the theme of one performance, with the favorite dishes of various parts of the country spotlighted in the recipes. Other performances are entitled "Foods in the Fashion Range" and "Blue Flame Show Boat."

Promotion of the cooking school in each locality begins about a month before its opening date when ads begin appearing in the weekly newspapers. If daily papers are published in the area, the ads start a week before the school opens. Spot announcements are broadcast on the local radio station.

Bumper cards plugging the school are mounted on gas company vehicles in the area. The company's information department prepares a package of news and feature stories and sends it to the gas company's office in the area for distribution to the local press.

Ohio Fuel feels that the show is more than worth the expense and effort. It builds good will by offering entertainment in areas where "live" shows are the exception rather than the rule. And it gives the gas company and gas appliance dealers and manufacturers a chance to show that gas and gas appliances are still the homemaker's best friend.

(Please turn to next page)

(Continued from preceding page)

Pittsburgh's natural gas companies

Midway barkers and utility men alike are shouting about the "super stupendous wonder" of the all-gas home now on display in Pittsburgh's West View Amusement Park. The city's natural gas utilities—Equitable Natural Gas Co., Manufacturers Light & Heat Co. and The Peoples Natural Gas Co.—in cooperation with a builder, a host of dealers, suppliers and appliance manufacturers have joined forces to present the last word in the modern all-gas modern home to fun-seeking Pittsburghers.

With each dollar's worth of park tickets, the midway customer gets a free chance on the $18,000 dream house. And, amid ferris wheels, roller coasters and hot dog stands, he can visit "his" home, which is fully equipped with range, refrigerator, clothes dryer, incinerator, furnace and water heater—all gas appliances. Adjacent to the home is a gas range booth in which up-to-the-minute models of Magic Chef, Dixie, Roper, Universal, Tappan, Chambers, Maytag, Welbuilt, Grand and Caloric ranges are displayed.

Once a week, an open-air gas cooking school, conducted from the gas range booth, attracts scores of visitors. In addition, it is broadcast all over the park via a loud speaker system for those enjoying other facilities.

The all-gas model home will go, complete with furnishings and appliances, to a lucky chance holder at the end of the park's 1952 season. In the meantime, the merits of gas and gas appliances are being shouted far and wide, to Pittsburgh's 700 thousand-odd inhabitants.

Much of the credit for this industry-boosting promotion goes to John A. Lammert, special representative of The Peoples Natural Gas Co., who coordinated the efforts of the various contributing groups. Other utility participants were: Ray Little, sales manager and Kathryn Barnes, home service director, Equitable Gas Co.; John McBurney, sales supervisor, The Manufacturers Light and Heat Co.; Ruth Severson, home service director, and Charles L. Yost, general sales manager, The Peoples Natural Gas Company.

Providence Gas Company

A modern all-gas home will be the major attraction when Rhode Island celebrates National Home Week, September 14-21. Built as a cooperative effort, incorporating the ideas of many Rhode Island builders, the home is fully equipped with "CP" range, refrigerator, automatic water heater and househeating system.

Completely furnished and decorated by a Providence department store, the home's highlight is its New Freedom Gas Kitchen.

Although the Builders' Show will last only two weeks, the house will be on display during July, August and September. Over 150,000 visitors are expected—one of whom will be the lucky winner when the Veterans of Foreign Wars wind up the festival by giving the house away.

Roy W. Worrell, assistant sales manager of Providence Gas Co., is responsible for seeing that gas appliances are featured so favorably in this promotion.

Public Service Electric and Gas Co.

The Heart-Saver Kitchen and Laundry, the problems of the cardiac housewife and the name, Public Service Electric & Gas Co., are becoming more and more familiar to Jerseyites as the months go by. For the Heart-Saver is being boosted in New Jersey in one of the most effective promotional campaigns throughout the country. Built by Public Service in cooperation with countless New Jersey suppliers, the kitchen is being displayed all over the state, under the sponsorship of the New Jersey Gas Association. Already it has been the feature attraction at the conventions of the New Jersey Home Builders (where it won a prize for quality and originality) and the New Jersey Master Plumbers. And when the New Jersey Gas Association held a home economics conference in Newark recently, Miss Bernice Strawn, home equipment editor of *Women's Home Companion* and originator of the kitchen addressed more than 150 persons during a demonstration.

The kitchen is now on display in Paterson under the sponsorship of the Passaic County Chapter, New Jersey Heart Association. Demonstrations have been held for the county's home economics students, cardiac doctors, architects, builders and women's clubs.

This fall, Public Service plans to show the Heart-Saver in Newark, under the auspices of the Essex County Chapter, New Jersey Heart Association. After that, all 13 county chapters will have the opportunity to display the kitchen in their territories.

The New Jersey venture is a living testimonial to the public health advances which are possible when a promotion-minded utility and cooperative health, civic and business groups join hands for a successful campaign.

Union Gas Company of Canada

Naturally, It's Gas at Canadian Fairs.

Union Gas Co. of Canada has been winning laurels at local fairs this summer with an eye-catching display of automatic gas appliances and an outstanding gas cooking school. The exhibit, which has been visited by thousands of Canadians in the last few months, was awarded first prize as the most effective display at Sarnia, Ontario, and won top honors at the Windsor Builders' Show.

The cooking school is a joint venture with Gurney Products, Ltd., and is conducted by home economists from both the utility and the food processor.

Record convention indicated

(Continued from page 6)

award presented by New York Chapter, Theta Sigma Phi, National Fraternity for Women in Journalism. She will talk on "Making Friends in Business—A Must."

J. Gordon Ross, Rochester Gas & Electric Corp., and coordinator of the Customer Activities Group, will preside at the luncheon meeting of the Accounting Section, Tuesday, Rutland Room, Haddon Hall. After introductory remarks by Ralph F. McGlone, The East Ohio Gas Co., Cleveland, chairman of the Acounting Section, awards of the Order of Accounting Merit, given in recognition for outstanding contributions to the A. G. A. Accounting Section, will be made by A. G. A. President Charles E. Bennett. A qualified speaker will discuss "Work Simplification" after an introduction by J. F. Rooney, Consolidated Edison Co. of New York.

Automatic computing machinery in Europe and the United States will be described by Dr. Howard Aiken, director, The Computation Laboratory of Harvard University. Dr. Aiken will be introduced by J. W. Roper, Washington Gas Light Company. B. F. McMillen, The Cincinnati Gas & Electric Co., will report on the customers' training

manual now being compiled. Arthur Skelton, The Peoples Gas Light & Coke Co., will give a report for the special committee on classification of accounts.

The Accounting Section will reconvene on Wednesday morning in the Viking Room, Haddon Hall, with William D. Sweetman, The Peoples Gas Light & Coke Co., presiding. Mr. Sweetman is coordinator of the general activities group of the Accounting Section. Marvin K. Collie, of the firm of Vincent, Elkins and Weems, Houston, Texas, will talk on the deferred compensation arrangement. He will be introduced by Burton P. Smith, Jr., Texas Eastern Transmission Corp., Shreveport

Mr. Sweetman will introduce Vera Green, assistant treasurer and secretary, Botwinik Brothers of Mass., Inc. She will speak on "Women in Management." The program will also feature a speaker on a general accounting subject, who will be introduced by Francis H. Crissman, The Columbia Gas System. Mr. McGlone will give a report of section chairman, and Alan A. Cullman will submit the report of the nominating committee before the election of officers of the Accounting Section for the coming year.

The Operating Section will conduct full programs on Tuesday afternoon, Wednesday morning and Thursday afternoon at the Hotel Ambassador. On Tuesday, at the Renaissance Room, under the chairmanship of H. Bruce Andersen, The Philadelphia Gas Works Co., the first subject "Synthetic Liquid and Gaseous Fuels" will be discussed by Dr. W. C. Schroeder, U. S. Bureau of Mines, Washington, D. C. Other subjects to be handled by competent speakers include "Gas Conditioning," "Economics of Corrosion Control" and "Economics of Fleet Operation."

On Wednesday morning, also in the Renaissance Room, the first speaker will be C. F. DeMey, Columbia Gas System Service Corp., New York. His talk will cover reserves and projected demand for natural gas and the economics of substitution. E. L. Henderson, United Gas Corporation, Shreveport, La., will give a paper on odorization. Then he will preside on a panel devoted to the same subject.

The meeting on Thursday afternoon at the 22 Club in the Ambassador will be devoted to Operating Section business. Included will be report of nominating committee and election of officers; a report on the *Gas Engineers' Handbook* by F. E. Vandaveer and safety reports by H. Bruce Andersen and F. H. Bunnell. A. C. Cherry will give a report for the special committee on piping on customers' premises, and E. G. Hammerschmidt, will present the report of the Chemical Committee.

Other reports include, Corrosion Committee by A. D. Simpson, Jr.; Distribution Committee by J. A. Whelpley; Motor Vehicles Committee by W. E. Albright; Gas Production Committee by C. L. Hulswit; and Purging Committee by G. R. King. Each of those reporting is chairman of the committee named.

Dwight L. Sargent, Consolidated Edison Co. of New York, Inc., and chairman of the A. G. A. Personnel Committee, will preside at a Personnel Relations Session at the Tower Room, Haddon Hall, Tuesday afternoon. David G. Moore, University of Chicago, will talk on "A Method of Measuring Employee Morale." The other guest speaker will be Eskil I. Bjork, president, The Peoples Gas Light & Coke Co., who will discuss "Management Decisions and Actions."

The Industrial and Commercial Gas and Residential Gas Sections will hold a joint meeting at Trimble Hall in the Hotel Claridge, 10.00 a.m., Wednesday morning. On this program W. L. Hayes, general sales manager, Montana-Dakota Utilities Co., Minneapolis, will speak on "Facing Up to Facts." Mr. Hayes is an ardent advocate of house-to-house salesmanship and he will speak on the need for hiring and training a large force of gas utility salesmen.

From the industrial and commercial viewpoint, George R. Walton, United Gas Pipe Line Co., Houston, will speak about the increased use of natural gas in the fast growing chemical industry. Tracy B. Madole, manager, commercial sales department, Magic Chef, Inc., will talk on commercial cooking business and the gas company.

The A. G. A. Accident Prevention Committee will hold a general meeting in the Venetian Room, Ambassador Hotel, Wednesday morning. A. S. Hancock, The Long Island Lighting Company, chairman of the Accident Prevention Committee, will preside and will deliver an opening talk. E. H. Eacker, vice-president of A. G. A., and president, The Boston Consolidated Gas Co., will discuss "The A. G. A. Executive Safety Committee, Its Aims and Ultimate Goal." Following his address, delegates will hear G. J. Stone, vice-president and general manager, Utilities Mutual Insurance Co., talk on "The Rising Compensation Costs in the Gas Utility Industry."

At the luncheon meeting on Thursday, in the Surf Room at the Ambassador, James V. Carpenter, vice-president, The Long Island Lighting Co., will speak on "Accident Prevention Among the Brass: When; Why; Who." Safety awards for qualifying companies will be presented by W. H. Adams, safety consultant, A. G. A. John Sherwin, Mine Safety Appliance Co., will discuss the value and use of gas detecting instruments. William Rogers, Ebasco Services, will talk on safety seminars and their value to the gas utility company.

Wednesday afternoon has been left open, to permit all delegates and guests to visit the GAMA exhibit.

The opening speaker at the general session, Thursday morning will be D. A. Hulcy, president, Lone Star Gas Co., Dallas, and past president, The United States Chamber of Commerce. Mr. Hulcy is one of the nation's great industry and business leaders. His talk on "Public Relations" will be interesting and valuable. Mr. Hulcy will be followed on the program by the Honorable Herbert R. O'Conor, United States Senator from Maryland. Mr. O'Conor, a gifted speaker will talk on "Utility Regulation, National or Local." Senator O'Conor is a member of the United States Senate Committee on the Judiciary. In this capacity and from his work on utility legislation and regulation in Baltimore before he was elected to the senate, he is splendidly qualified to discuss the controversial subject of regulation of public utilities.

The Entertainment Committee has arranged for an entertaining Ladies' Party at one of the prominent boardwalk hotels on Tuesday. Tuesday night has been designated as GAMA exhibit night and a reception will be given in the ballroom at the Auditorium. A. G. A. will present an exceptionally fine program of entertainment followed by dancing in the ballroom on Wednesday evening, and on Thursday evening, GAMA will sponsor an additional program of entertainment at the Auditorium Ballroom.

Growing giant

(Continued from page 11)

mand? The Chamber of Commerce? The City? The State? The Federal Government? None of these even contemplates it. If a city wants a gas reserve it can go out and buy it on the competitive market and hold it.

"Of course, nobody is going to pay the taxes and interest on the natural gas reserves somebody might *some* day *possibly* want for some *prospective* plant that *might* come to the area.

"We surely do not want any *subsidy* for such a situation.

"Let the wellhead price be freely competitive and we will have adequate gas."

Those persons who are on the other side of the argument and who would limit the exportation of gas have not shown, so far as I am aware, how the commerce clause of the federal constitution can be hurdled or by-passed. It is true that the Supreme Court of the United States has recognized the rights of the states to regulate the production of gas in the prevention of waste. The decision of the court sustaining the minimum price order of the Corporation Commission of Oklahoma is a recent example.[12]

But it will be difficult to apply this conservation power so as to differentiate between gas produced for consumption in one area as opposed to gas produced for consumption in another area. In other words, the conservation rules which would restrain the production of gas for exportation must also restrain its production for local consumption in order to meet constitutional requirements.

From the economic point of view those persons who would restrain the exportation of gas or confine it to the areas of production make these points:

Exports have been over-expanded and it is uneconomic to export gas to areas in which there are plentiful supplies of coal and thus ultimately to exhaust the reserves in the areas of production which do not have an adequate supply of other fuels readily available. That the producing states should retain their natural gas and thus attract industries who seek this clean, efficient and low cost fuel.

A federal governmental official has issued a warning to the gas producing states, and particularly to Texas, that the danger point of overselling natural gas has been reached. Hon. Harrington Wimberly, a member of the Federal Power Commission, issued this warning in an address before The Texas Independent Producers and Royalty Owners at Tyler on September 28, 1951. He said, in part:

"While we are showing concern for the welfare of distant consuming states it might be well to point out at this juncture that your own state of Texas consumes more natural gas than any other state in the Union. *It would really be ironical if the impact of short supplies a few years hence should fall the heaviest on the state that has furnished the nation with more than one-half of its natural gas.*

". . . *Unless new discoveries are made and known reserves are greatly increased, the producing states, as well as the so-called consuming states, will be pinched for supplies in a very few years.*

". . . *If consumption could be frozen at the 1955 level there might be no cause for undue concern but this pent-up demand cannot and will not be frozen at that level.*

". . . *But you people who are interested in maintaining the long-time values of your investments in producing properties do not want to sell your own state short if you can help it.*

"However, there is a reasonable basis to question the wisdom of Texas trying to supply 2 trillion cubic feet of natural gas annually to interstate markets in 1953 or 1954 and if it is left to economic forces alone this take could easily reach 3 trillion cubic feet or more before 1960.

". . . It is important, in my view, that the citizens of Texas realize that of this date around *50 percent of their natural gas reserves within the borders of this state has already been sold for future interstate shipment and that the economy of the state must be geared to the remaining 50 percent.* In other words, as matters now stand, in spite of the 100 trillion cubic feet of natural gas remaining underground, *Texas might be no better off in a few years than some of the areas a thousand or fifteen hundred miles away which are depending on Texas gas to heat their homes and to sustain their industries.* I say that because the ratio of Texas consumption per trillion cubic feet of what might be termed free reserves is greater than from reserves dedicated to interstate pipelines."

It is somewhat ironical to find a state commissioner, General Thompson, favoring a liberal policy toward exportation and a federal commissioner favoring a rather restricted policy with reference thereto.

Exportation of gas from Texas has been of benefit to the state and its people, and on many occasions the writer has defended the right of the producers to sell and of the pipelines to buy and transport gas for consumption in other states. *But there must be a limit to the natural gas reserves which will ultimately be available; and at some point there should be a restraint upon the construction of new facilities or additional facilities for the exportation of gas from the producing states. It will take experts within the field of regulation to define the proper limits and to impose the necessary restrictions. And the necessary determinations should not be delayed.*

The general public is confused in its thinking on this great and important question, and it is no wonder that they are. Not only are they confronted with diversity of opinion among experts, but they are presented with conflicting and oftentimes misleading statistics. Recently a prominent and reliable Texas newspaper published the statement of a state representative to the effect that "29 inter-state gas pipeline companies are taking to users in other states 62.5 percent of the natural gas *gathered* in Texas." The statement was quite lengthy, but for present purposes we need go no further to illustrate the point. The critical word in this statement is the word "gathered." If the general public understood the important distinction between the word "gathered" and the word "produced," there would be no cause for suggesting that the statement was misleading. But they do not. And the statement was obviously intended to leave the impression that 62.5 percent of the gas produced in Texas was exported to other states. In order to give the statement the appearance of authenticity, its author said that it was based upon detailed research into sworn reports of gas pipeline company executives made to the Railroad Commission and to the comptroller.

Now, the gathering tax does not apply to all gas produced in Texas, and the statistics used were taken from reports filed with the comptroller in connection with the gathering tax. The gathering tax fig-

ures included only 73.5 percent of the total gas produced and marketed in Texas during the period in question. If it were intended that the public should have a true picture, the statement should have been made that of the total gas produced and marketed in Texas 45.91 percent was exported.

Again let me illustrate how statistics can have a delusive exactness. Just the other day another prominent Texas newspaper presented these statistics:

"Gas exports increased 29 percent in February, compared to last year. The Railroad Commission reported Monday that 164 billion of the 267 billion cubic feet of Texas gas *bought by pipelines* went into other states. They totaled 65 percent of all the gas *produced* in Texas, and was 26 percent greater than pipeline sales a year ago. Marketed production of Texas gas in February totaled 352 billion cubic feet, up 21 percent."

You will notice that in the first sentence there is a comparison between the amount of gas which *pipelines* bought for sale in Texas and the amount which they bought for sale in other states. Then the following statement is made that "They totaled 65 percent of all the gas *produced* in Texas. . . ." The sentence which follows, to-wit, *"Marketed production* of Texas gas in February totaled 352 billion cubic feet . . ." completely refutes the 65 percent figure. Now, 164 billion, the amount that went to other states, is not 65 percent of 352 billion, the marketed production, but 46.6 percent. Thus, when analyzed, the statement becomes entirely misleading and confusing and 40 percent in error.

When publishing figures with reference to the quantity of gas exported editors should remember that there is a vast difference between the amount of gas produced and marketed and the amount upon which the gathering tax is paid or the amount which pipelines purchase. These figures will never be identical. Much of the produced gas is not marketed because it is used for repressuring, lease operations, plant operations and in the manufacture of carbon black. The gathering tax is not paid on gas which is used for these purposes. If the amount of gas exported is expressed as a percentage of the gas produced, the result will not be the same as if it were expressed as a percentage of the gas upon which the gathering tax is paid or of the gas taken by pipelines. If one is to get a true comparison of the amount of gas exported with the amount consumed in Texas, it should be based upon the total amount of gas produced and marketed.

In the last session of the Legislature a strenuous effort was made to obtain legislation which would authorize the Railroad Commission to fix the minimum price of gas at the well or in the field. Two of the bills which were introduced would have fixed a minimum price of not less than ten cents per Mcf.

The proponents of this legislation consisted of an amalgamation of individuals, associations and a few major corporations. When these bills were considered before the legislature many wealthy individual producers present—none of whom could be regarded as being in distressed circumstances—pled long and hard and worked day and night to get the legislation across in the pretended interest of the poor land and royalty owners. They contended that a minimum field price for gas was necessary in order to prevent economic waste. But they never at any time presented any evidence of economic waste under existing conditions. What they sought was a windfall at the hands of the legislature. It was distressing to see these people who have boasted of their individualism and who have prided themselves on their achievements through individual initiative and freedom of action, seeking governmental subsidies and handouts. What they sought from the legislature was a floor to keep them from going down financially but with no ceiling to protect the consuming public. Evidence presented to the legislature and which was never refuted, showed that if a minimum price of ten cents per Mcf of gas were established at that time, the producers in Texas would have received approximately $146 million more annually than they were then receiving. Of this amount 36 producers would have benefited to the extent of approximately $89 million. Texas consumers would have been faced with an increase in the cost of natural gas to the extent of approximately $97 million. Obviously it was pertinent to weigh the relative interests of the producers and consumers in a situation of this kind, and it is pleasing that the legislature finally refused to enact any such discriminatory legislation which would have favored a few at the expense of many of our citizens.

If we are to have price fixing of gas in the field by governmental action why should it be confined to the fixing of minimum prices? If there is need for regulation of field prices, then the regulation must be broad enough to protect the total public interest—that is, the consumer and the gas utility as well as the producer. But when it was suggested that the minimum price bill should be amended so as to accomplish this result, all of the proponents strenuously objected.

It is neither necessary nor wise to regulate the field price of natural gas. General Thompson was right when he said[11] that, "A free, fair, competitive price will get the gas discovered, produced, processed, transported and distributed. The wellhead price should not be fixed by law, either state or federal. Attempts at price controls generally mean scarcity and high prices. The attempts at helping the consumer nearly always go off on governmental over-management and arbitrary dictation."

If producers invite price fixing in order to obtain a price advantage, they must be prepared ultimately to assume the disadvantages of price fixing. If there is to be governmental regulation of the field price, it must be consistent with governmental regulation of the natural gas utilities who buy, transport and distribute the gas to consumers. Moreover, the producers who resist federal regulation must recognize that if Texas should fix a field price for intrastate gas the Federal Power Commission may be able to fix the field price for interstate gas.

There is much complaint among producers about the price schedules in the "old long-term contracts." It is said that these contracts were made at a time when the producers were at the mercy of the gas companies and stood defenseless. It is further said that the gas companies have reaped an unfair profit through these old low-price contracts. Some of this complaint is doubtlessly justified, but it is equally sure that much of it is sheer propaganda. Much of it is honestly made, but much of it is not honestly justified. A natural gas company whose rates are regulated cannot earn more than a fair return on its rate base and its rates are determined on the basis of actual operating expenses, including the cost of purchased gas. If the gas is purchased at a low price, such low price is used in fixing the rate and the gas utility receives no advantage whatsoever from the low price. It is the consumer who receives the advantage. Moreover, when these old

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low-price contracts were made, oil and gas leases were purchased at low costs, mineral interests were purchased at low costs, and oil and gas wells were drilled at low costs. In many instances the prices established in the past would afford the producer as much profit on his investment as the prices of today afford the producer who buys his leases and drills his wells at today's prices.

Although producers insist upon a revision of contracts which were made when prices generally were low, they do not propose to revise their leases so as to provide an increased bonus or rental or royalty to the landowner who sold to them when prices were lower than they are today. If they seek equity, they must do equity.

Without the aid of minimum price legislation the producers of natural gas in Texas are faring quite well. A few years ago field prices ranged from 3 to 6 cents per Mcf. Today contracts are being made at prices ranging from 7 to 15 cents per Mcf. The price provisions of many long-term gas purchase contracts have been voluntarily revised upward by the pipeline companies where they were materially out of line with current prices; and these revisions could not have been legally compelled. The rapid increase in the field price of gas has been achieved in the open market by free negotiations, unhampered by governmental restrictions, and the natural gas companies have, on the whole, shown business statesmanship in their dealings with the producers.

General Thompson said, "It is to the consumer's vital, long-term interest that the wellhead price of gas be increased." And he pointed to the fact that the average householder consumes from three to seven Mcf of gas per month over the year round, that an increase in the wellhead price of gas, if passed on to the average consumer, would be almost negligible, whereas his benefits are great; that a five-cent per Mcf increase at the wellhead would amount to about 25 cents a month, or less than one cent per day, to the household consumer. It is most certain that the increases which are being made in the field prices for natural gas will result in higher prices to the consumer in Texas, as elsewhere. It should be remembered that Texas consumes more natural gas than any other state in the Union, and that as a consequence any increase in the cost of gas in the field, whether occasioned by increases in the prices paid to producers or by taxation, are very likely to result in corresponding increases in the burner tip rates paid by Texas consumers.

As a part of the movement of the producers to increase the field prices of gas, some of them and in particular one of their organizations has recently advocated posted field prices. If by this they mean that natural gas should be purchased in the same manner that crude oil is purchased, then these advocates are being unrealistic in their zeal for more money. As we all know, the oil company which posts the highest field price is apt to obtain most of the production in a particular field. Hence, in order not to be placed in the position of losing connections, one oil company frequently matches the higher price posted by another. Thus the posted prices for crude oil of the same quality are generally uniform within a field and sometimes within an entire state. If this system were applied to natural gas, it would mean that a company which was established within a field under contract for the purchase of gas could have its entire market taken away by a new company which elected to come into the field and post higher field prices unless it met the new offer. It would mean that a natural gas company would not know from day to day or month to month what its costs for gas would be and therefore it would be unable to know what consumer rates would be compensatory to it; and it would be unable to make long-term contracts with industrial consumers. Regulatory authorities would be in the same fix. They could not fix a rate with any assurance that it would hold from day to day or from month to month. The regulatory processes would be in a constant turmoil. The rates of natural gas utilities cannot be changed from month to month. They are fixed by regulatory authority to produce a return upon a particular rate base. When the operating expenses fluctuate materially, the rates will be out of balance with the prescribed return; and public utility rates can only be changed after hearings and sometimes after protracted litigation.

This is not true with respect to petroleum products the price of which at the consuming level, as well as at the producing level, is subject to almost immediate change by the producers, purchasers, manufacturers and distributors of petroleum products. The price of gasoline at the pump can be changed very quickly. The price of natural gas at the consumer's burner cannot be. If there are to be posted prices for natural gas in the field, then there must be posted prices, with the same degree of flexibility, at the burner tip. This, of course, would completely circumvent governmental regulation and the traditional manner of operating public utilities.

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[1] Articles 6008, 6049(a), 6049(c), 6049(d), 6049(e) and 6014, Revised Civil Statutes of Texas.

[2] The Cox Law—Articles 6050-6060, Revised Civil Statutes of Texas.

[3] Article 6053(a), Revised Civil Statutes of Texas.

[4] Natural Gas Act, 15 U.S.C.A. § 717.

[5] Securities Act of 1933, 15 U.S.C.A. 197; Securities and Exchange Act of 1934, 15 U.S.C.A. 358; and if a public utility holding company, the Public Utility Holding Company Act of 1935, 15 U.S.C.A. 485.

[6] These statistics are taken from the 1952 Annual Joint Report of the American Gas Association and the American Petroleum Institute. A breakdown of the reserves in the five states mentioned is as follows: Texas, 105.6 trillion; Louisiana, 29 trillion; Kansas, 13.4 trillion; Oklahoma, 11.8 trillion; New Mexico, 11.5 trillion. Round figures have been used.

[7] *Oklahoma vs. Kansas Natural Gas Co.*, 221 U. S. 229, 250.

[8] *Pennsylvania vs. West Virginia*, 262 U. S. 553.

[9] *United Fuel Gas Co. vs. Hallanan*, 257 U. S. 277; See also, *Hope Natural Gas Co. vs. Hall*, 274, U. S. 284, 286; and *Parker vs. Brown*, 237 U. S. 341, 360, 361.

[10] *Department of Conservation of State of Louisiana, et al. vs. Federal Power Commission*, 148 Fed. (2d) 746 (cert. den.).

[11] "Natural Gas of Texas"—An address by Lt. General Ernest O. Thompson before the Southern Gas Association, Galveston, April 29, 1952.

[12] *Cities Service Gas Company vs. Peerless Oil & Gas Company*, 340 U. S. 179.

Supervisor

(Continued from page 27)

Co. are only part of that company's activities in the field of supervisory development. The company also makes use of the conventional and popular activities such as supervisory conference programs, special job manuals for supervisors and cadet training programs.

There's a lot more to good supervision than merely living by the book. Manuals do not displace the essential requirement of good judgment.

Supervisors should be given all possible help, but in the final analysis their success will depend upon how well they use their heads in meeting each problem as it arises. Printed manuals and formal programs are merely an aid. If a supervisor develops the attitude of mind that such aids are substitute for his own straight thinking, he will not be a good supervisor.

This principle is recognized and emphasized in the use of the specific aids cited in this article. For example, the

preface to the "Manual of Supervisory Authority" points out that the job of supervision cannot be reduced to a cut-and-dried basis; it then emphasizes the paramount need for the exercise of sound, careful judgment by the supervisor in meeting the problems that inevitably will arise in his work.

There is widespread interest today throughout American industry and business in educating employees in the fundamentals of our free enterprise system. The objective is to give them the facts, so that they will know what makes the system work and so that they will realize that this system has produced both greater opportunities for the individual, and a higher standard of living for the entire nation, than any other system in the world.

The efforts to accomplish this objective cannot be fully successful without the whole-hearted support of the supervisory personnel. It is logical, then, that programs of American economic education be presented first to the supervisors, and many companies have done just that. But supervisors should at the outset of such programs be receptive to them. Their attitude will be receptive only if top management has done a good initial job in the selection and the indoctrination of the new supervisor, and a good continuation job of developing supervisory skill, performance, and attitude.

When an "Economic Education" program is launched some supervisors may respond, "Oh yeah? What are they trying to feed us this time?" This would indicate that little attention has been given to supervisory development. In organizations where, on the other hand, constant and intelligent effort has been devoted to building better supervision, the reaction can well be, "This is good! These are the basic facts about business that my men ought to know. If they understand the facts, they will be better citizens, and better workers, and we'll have a happier and more productive organization."

Management recognizes today, more than ever before, the importance of effective supervision. A supervisory force that performs all of its responsibilities well is essential not only to efficient operation, but also to the creation of a well informed attitude among workers.

Supervisors who really are part of the management team, who know their responsibilities well and who get all reasonable help from their company in meeting them, will be an important factor in the continued rise of the American free enterprise system.

Study piping code

(Continued from page 22)

Transcontinental Gas Pipe Line Corp., Houston

Charles F. de Mey, vice-chairman, Columbia Gas System Service Corp., New York

C. T. Schweitzer, secretary, Southern California Gas Co., Los Angeles

Charles B. Abbot, Colorado Interstate Gas Co., Colorado Springs

O. P. Adams, National Tube Co., Pittsburgh

Clyde D. Alstadt, Columbia Gas System Service Corp., Columbus, Ohio

H. Bruce Andersen, The Philadelphia Gas Works Co., Philadelphia

Stephen A. Bergman, Panhandle Eastern Pipe Line Co., Kansas City

Victor F. Bittner, The Peoples Gas Light & Coke Co., Chicago

Norman F. Blundell, Trunkline Gas Co., Houston

J. A. Bramblett, Fall River (Mass.) Gas Works

John H. Carson, The East Ohio Gas Co., Cleveland

R. A. Cattell, U. S. Bureau of Mines, Washington

John A. Clark, Hope Natural Gas Co., Clarksburg

Kirby E. Crenshaw, Gas Advisers, Inc., New York

A. J. Del Buono, Michigan Consolidated Gas Co., Detroit

J. A. Dickinson, National Bureau of Standards, U.S. Dept. of Commerce, Washington

John F. Eichlemann, El Paso Natural Gas Co., El Paso

Julian L. Foster, Lone Star Gas Corp., Dallas

George E. Fratcher, A. O. Smith Corp., Milwaukee

John L. Gere, Cities Service Gas Co., Oklahoma City

James W. Hall, Transcontinental Gas Pipe Line Corp., Houston

M. M. Heller, United Gas Pipe Line Co., Shreveport

Carl A. Henrikson, U.S. Pipe & Foundry Co., Burlington, New Jersey

Dr. Charles R. Hetherington, Ford, Bacon and Davis, Inc., New York

Hugh H. Hunter, Public Service Commission of Maryland, Baltimore

Hugh H. Hyde, Bechtel Corp., San Francisco

Lloyd R. Jackson, Battelle Memorial Institute, Columbus, Ohio

Carl T. Kallina, Federal Power Commission, Washington

L. W. Kattelle, Walworth Co., New York

W. P. Kliment, Crane Co., Chicago

Gordon G. Dye, Southern California Gas Co., Los Angeles

M. C. Madsen, Northern Natural Gas Co., Omaha

J. G. Marshall, The Fluor Corp. Ltd., Los Angeles

B. T. Mast, Tennessee Gas Transmission Co., Houston

P. A. Mills, Moody Engineering Co., Pittsburgh

James J. Murphy, M. W. Kellogg Co., New York

Henry W. Nicholson, Public Service Electric and Gas Co., Newark, New Jersey

Paul E. Noll, Consolidated Western Steel Div., U.S. Steel Co., Los Angeles

M. J. Paul, Natural Gas Pipeline Company of America, Chicago

F. G. Sandstrom, Consolidated Edison Company of New York, Inc., New York

W. H. Savage, Robert W. Hunt Co., Chicago

A. J. Shoup, Texas Eastern Transmission Corp., Shreveport

J. C. Siegle, Youngstown (Ohio) Sheet & Tube Company

Roscoe D. Smith, Pacific Gas & Electric Co., San Francisco

Prof. M. G. Spangler, Iowa State College, Ames

F. E. Stanley, Midwestern Constructors, Inc., Tulsa

H. L. Stowers, Texas Gas Transmission Corp., Owensboro, Kentucky

J. L. Thompson, Michigan-Wisconsin Pipe Line Co., Detroit

J. Thompson Vann, American Cast Iron Pipe Co., Birmingham

Frank S. G. Williams, Taylor Forge & Pipe Works, Chicago

Dean M. Workman, Ebasco Services, Inc., New York

Science

• Someone has described science as an orderly arrangement of what at the moment seem to be facts.

—Research Viewpoint, Esselen Research Corporation

New A.G.A. members

Gas companies

City Gas Company of New Jersey, Flemington, N. J.
(Harry E. Carver, Pres.)

Manufacturer companies

A. L. M. Manufacturing Co., North Hollywood, Calif.
(Avy L. Miller, Owner)

Ajax Boiler & Heater Co., Los Angeles, Calif.
(Theodore Fulkerson, Owner)

Individual members

Charles F. Barber, Pacific Gas & Electric Co., Salinas, Calif.

Henry E. Basler, Pacific Gas & Electric Co., San Francisco, Calif.

John S. Beard, Consumers Gas Co., Reading, Pa.

Nelson L. Best, Johns Manville Sales Corp., San Francisco, Calif.

A. A. Buss, Wisconsin Power & Light Co., Beaver Dam, Wis.

B. K. Dunshee, Pacific Gas & Electric Co., San Francisco, Calif.

Cyril J. Ganter, Consumers Gas Co., Reading, Pa.

William V. Gilpin, Southern Union Gas Co., Albuquerque, N. M.

Ralph C. Gude, Public Service Co. of Colo., Denver, Colo.

Harold M. Gustafson, Pacific Gas & Electric Co., San Francisco, Calif.

Sandy Hallock, Byer & Bowman Advertising Agency, Columbus, Ohio

Guerdon H. Head, Wisconsin Natural Gas Co., Racine, Wis.

Horace Hudson, Southern Union Gas Co., Albuquerque, N. M.

W. D. James, Southern Union Gas Co., Flagstaff, Ariz.

R. B. Kitzmiller, Rockwell Manufacturing Co., San Francisco, Calif.

F. E. Luethi, Public Service Co. of Colo., Denver, Colo.

Kenneth R. Lydecker, Transcontinental Gas Pipe Line Corp., Houston, Tex.

Fred G. Maneely, Pacific Gas & Electric Co., Salinas, Calif.

Paschal Martin, The Pure Oil Co., Chicago, Ill.

R. A. Merbs, Pacific Gas & Electric Co., Salinas, Calif.

Kenneth F. Muldoon, Eureka Williams Corp., Gas-O-Matic Div., Bloomington, Ill.

Eugene P. Myers, Pacific Gas & Electric Co., Oakland, Calif.

P. E. Nicholls, Southern Union Gas Co., Galveston, Tex.

Emory F. Nussbaum, Public Service Co. of Colo., Denver, Colo.

William J. Paul, Pacific Service Employees Association, San Francisco, Calif.

Charles H. Price, Southern Union Gas Co., El Paso, Tex.

C. B. Reinschmidt, Savannah Gas Co., Savannah, Ga.

Frederick G. Sandstrom, Consolidated Edison Co., New York, N. Y.

F. K. Schwartz, Alpha-Lux Co., Inc., Philadelphia, Pa.

W. Norman Sims, Philadelphia & Reading Coal & Iron Co., Philadelphia, Pa.

W. E. Steinwedell, The Gas Machinery Co., Cleveland, Ohio

William H. Thorpe, Philadelphia Gas Works Co., Philadelphia, Pa.

Charles Tisch, Jr., Charles Tisch, Inc., Brooklyn, N. Y.

A. D. Williams, Jr., Columbian Gasoline Corp., Monroe, La.

Pressure-gas

(Continued from page 35)

steam and 320 cu. ft. oxygen distributed as 45 cu. ft. air and 310 cu. ft. pure oxygen, all per MCF of CO + H_2 produced.

On the basis of 6¢/MCF compressed air, $5.00/ton oxygen, $4.00/ton slack coal and allowing 30¢/M lb. process self-generated and self-superheated steam, the synthesis gas raw material cost varies from 14.5 to 16.2 cents per MCF of CO + H_2 depending on the amount of oxygen enrichment used.

TABLE II

AVERAGE CHEMICAL ANALYSIS OF COAL FEED ILLINOIS NO. 6 SEAM, HIGH VOLATILE C BITUMINOUS

Proximate Analysis, as rec'd, wt. %	
Moisture	6.0
Volatile Matter	35.5
Fixed Carbon	51.0
Ash	7.5
Ultimate Analysis, dry, wt. %	
C	75.0
H	4.6
N	1.3
O	9.5
S	1.6
Ash	8.0
Ash Fusibility, °F	2273
Gross Heating Value, dry, Btu/lb.	13,200

TABLE III

AVERAGE SIEVE ANALYSIS OF HAMMERMILL PULVERIZED COAL

U.S. Sieve	*Wt. %*
+10	0.0
10/20	1.8
20/40	50.8
40/100	34.4
100/200	9.5
—200	3.5

TABLE IV

TYPICAL FLASH PULVERIZED PRODUCT

U.S. Sieve	*Wt. %*
+20	0.0
20/40	4.0
40/100	15.0
100/200	15.0
200/325	21.0
—325	45.0

The gasification results were sufficiently consistent to establish certain well defined trends in the operating variables. These trends are briefly summarized as follows:

(1) Gases produced varied from a 150 Btu producer gas using 30% oxygen concentration to a 240 Btu synthesis gas with 70% oxygen concentration.

(2) The gas heating value generally increased by 5 Btu per cu. ft. with each atmosphere increase in gasification pressure.

(3) The gas heating value reached a maximum in the range of 0.7 to 0.85 lb. oxygen/lb. coal.

(4) With a constant steam-coal ratio of 1.0 lb./lb., the ratio of H_2/CO in the gases varied from 0.95 to 1.4 depending on the oxygen-coal ratio and oxygen concentration used.

(5) Maximum values of steam decomposition of above 50% occurred when the oxygen-coal ratio was approximately 0.9 lb./lb.

(6) The percentage carbon gasified increased rapidly with oxygen-coal ratio and attained values of over 90% at 0.85 lb. oxygen/lb. coal.

(7) The carbon gasification increased generally by 4% for each atmosphere increase in gasification pressure.

(8) The cold gas efficiency increased with both oxygen-coal ratio and gasification pressure and attained maximum values of nearly 75 percent based on the heating value of the coal.

(9) The oxygen, coal and steam requirements per MCF synthesis components (CO + H_2) were greatly influenced by both the oxygen-coal ratio and gasification pressure. Minimum requirements were as low as 33 lb. steam, 33 lb. coal and 300 cu. ft. total oxygen.

(10) The coal ash removed in the process as dust and slag was as high as 100% of the total ash fed in the coal.

In the above discussion an attempt was made to describe the operation and some of the results of a pilot scale coal gasification unit. The correlations developed are in the preliminary stage and additional data are being obtained to extend the range of the variables studied. The results so far clearly define the important variables affecting the process and indicate the magnitudes of their effects. Future work will include (a) the completion of tests with 90% oxygen concentration, (b) a study of the effects of superheated steam-coal ratios up to 1.75 lb./lb. coal, and (c) investigation of higher flow rates at gas residence times below 1 second.

In conclusion it may be said that the suspension gasification process represents one of the methods under consideration for possible future application in gas production. Its main advantages are that it is a single stage, continuous process that has high volumetric throughput potentialities for the processing of any type of coal. The process seems economically feasible because of the large quantities of readily available, low cost finely divided fuels in the United States and because of recent developments in lowering the cost of oxygen. Anticipated benefits of the process for the industry include the production of (a) a low cost base or carrier gas for blending purposes, (b) a gas of intermediate heating value by oil carburetion of the hot make gases from the gasifier, and (c) a gas of adjusted H_2/CO ratio which may be used for the synthesis of methane for distribution as pipe line gas.

TABLE V

RAW MATERIAL COST ESTIMATE BASED ON OPTIMUM GASIFICATION RESULTS COAL TYPE, ILLINOIS HIGH VOLATILE C

Oxygen Concentration, mole %	50	70	90*
Oxygen-Coal Ratio, lb./lb.	0.90	0.83	0.80
Oxygen-Coal Ratio, % of stoichiometric	40.0	37.0	35.5
Steam-Coal Ratio, lb./lb.	1.0	1.0	1.0
Superheated Steam Temp., °F	1550	1600	1700
Gasification Pressure, atm. absolute	5	5	5
Gas Heating Value, Btu/cu. ft.	200	232	265
Percentage CO + H_2	63	73	84
Carbon Gasified, percent	87	90	93
Cold Gas Efficiency, percent	70	72	74
Decomposition of Total Steam, percent	52	52	53
Requirements per MCF CO + H_2			
a) Compressed Air, SCF	485	197	45
b) Oxygen, SCF	258	288	310
c) Total O_2 in Air and Oxygen, SCF	360	330	320
d) Steam, lb.	33	34	35
e) Coal, lb.	34	33.5	33
Raw Material Cost, cents per MCF CO + H_2			
a) Compressed Air at 6c/MCF	2.9	1.2	0.3
b) Oxygen at $5.00/ton	5.5	6.1	6.6
c) Process Superheated Steam, (self generated) at 30c/M lb.	1.0	1.0	1.0
d) Slack Coal at $4.00/ton	6.8	6.7	6.6
Total Raw Materials Cost for Synthesis Gas	16.2	15.0	14.5

* Anticipated results from interpolation of data.

Budget sells househeating—

(Continued from page 16)

January, February, March and April.

"Under the 10-month Gasco Budget Plan," Leary stated, "there is no ending-month reconciliation of customer's bills, such as in most of the plans we studied before selecting our plan. For this reason we are able to keep bookkeeping costs at a minimum." The company has not had to add any employees to bookkeeping department since plan was instituted.

In leveling off cold weather gas bills, Leary noted that there were very few applications where the highest bill of the year is more than three percent above the average bill during the entire year.

This, he explained, will aid materially in eliminating many of the high bill complaints during winter months and the mistaken impression many customers pass on to friends and neighbors that the highest bill of the winter is a typical monthly bill for gas service.

The budget plan also will reduce the number of delinquent bills and partial payments during the peak months since it spreads the fuel costs throughout the year and eliminates uneven heating bills that make budgeting difficult.

CONVENTION CALENDAR

1952

SEPTEMBER

3-5 •Pacific Coast Gas Association, Ambassador Hotel, Los Angeles, Calif.

5 •New Jersey Gas Association, Monmouth Hotel, Spring Lake, N. J.

8-10 •A.S.A. Third National Standardization Conference, Museum of Science and Industry, Chicago, Ill.

22-24 •American Trade Association Executives, Annual Meeting, Royal York Hotel, Toronto, Ontario.

OCTOBER

1-3 •Wisconsin Utilities Association, Technical and Sales Sections Convention, Schroeder Hotel, Milwaukee, Wis.

20-24 •National Safety Congress and Exposition of the National Safety Council, Chicago, Ill.

20-24 •National Metal Exposition, Philadelphia, Pa.

21-24 •The American Dietetic Association Exposition, Minneapolis, Minn.

23 •Institute of Gas Technology, Annual Meeting, Chicago, Ill.

27-30 •A. G. A. Annual Convention, Auditorium, Atlantic City, N. J.

27-31 •GAMA Exposition, Auditorium, Atlantic City, N. J.

NOVEMBER

10-13 •American Petroleum Institute, Annual Meeting, Chicago, Ill.

19 •American Standards Association, Waldorf Astoria, New York.

20-21 •Mid-Southeastern Gas Association, Annual Meeting, Sir Walter Hotel, Raleigh, N. C.

30-Dec. 5 •American Society of Mechanical Engineers, Hotel Statler, New York, N. Y.

1953

FEBRUARY

2-4 •A. G. A. Home Service Workshop, Baker Hotel, Dallas, Texas

MARCH

2-6 •American Society for Testing Materials, Hotel Statler, Detroit, Mich.

16-20 •National Association of Corrosion Engineers, Hotel Sherman, Chicago, Ill.

26-27 •New England Gas Association, Hotel Statler, Boston, Mass.

26-27 •Oklahoma Utilities Association, Tulsa Hotel, Tulsa, Okla.

27-29 •Mid-West Regional Gas Sales Conference, Edgewater Beach Hotel, Chicago, Ill.

30-April 1 •Mid-West Gas Association, Broadmoor Hotel, Colorado Springs, Colorado

APRIL

12-16 •A. G. A. Distribution, Motor Vehicles and Corrosion Conference, Hotel Sherman, Chicago, Ill.

20-22 •National Conference of Electric and Gas Utility Accountants, Hotel Sherman, Chicago, Ill.

Personnel service

SERVICES OFFERED

Sales or Operational—18 years' experience in the gas industry, in the fields of sales, sales supervision, utilization engineering and operational management. College degree, have been commercial and industrial manager (26,000 meters) and responsible for industrial, house heating, commercial and government accounts including sales and service. A good practical knowledge of most every phase of the utility business. Resume available or interview can be arranged readily. **1704.**

Utilization-Sales—15 years of gas distribution and utilization experience. Experience has included management and sales. Would consider traveling as sales and service representative. **1705.**

Chemist—College graduate with a bachelor of science degree in chemistry. Good background in chemistry, including two years of physical chemistry, and various other sciences as well as mathematics. Male, single, willing to travel and draft exempt. (21). **1706.**

Manager—Recent experience includes participation in conversion from manufactured to propane-air gas, construction of propane-air mixing, and bulk cylinder filling propane plants. Also supervision of construction of necessary facilities for changeover from manufactured to natural gas and conversion. Previously employed in managerial capacity for twenty years in two separate gas properties. (44). **1707.**

Treasurer-Controller—Wide experience in organization and administration at policy-making level. Development of new and improved management facilities. Several years experience as supervisor of appliance sales and policies for medium sized New England gas utility. Appliance inventory control and general operating budgets. Excellent correspondent. Early experience in office management, credits and collections. Twenty-four years' experience in the public utility field. Ability to solve administrative problems with minimum degree of confusion. Excellent references, resume mailed on request. University graduate, degree in business administration. **1708.**

Gas Engineer—Chief engineer of a natural gas distribution company, 40,000 meters, with college training, seeks position as gas engineer or distribution superintendent of natural gas company in the midwest, south, or west coast. Experience in RW, constructions, cathodic protection, underground storage, measurement. Preparation of exhibits for regulatory bodies, and all phases of distribution work. Married, age 34. **1709.**

Manufacturers' Representative—Twenty-five years' experience as district, sales and general manager of utility company. Desires position as manufacturers' representative in Florida-Georgia area or will relocate if necessary. **1710.**

Gas Distribution Engineer entirely familiar with all phases of gas distribution, including low, medium and high pressure, steel and cast iron mains. Experienced in design, operation and supervision of distribution facilities such as meter, customer service, holder operations, regulators, mains and services. Familiar with manufactured, natural and propane gas operations. Has had actual experience in preparing and converting large and small distribution properties from manufactured and propane gas to natural gas. Knowledge of industrial and commercial applications. University graduate with a degree in Mechanical Engineering, excellent references, married. **1711.**

POSITIONS OPEN

Sales Promotion—Combination utility, 75 miles from New York City, has opening for young man interested in all phases of selling. Utility does not sell appliances directly but promotes domestic and commercial gas and electric equipment through local appliance dealers, department and specialty stores. Work entails forecasts, sales planning, personal contact. Experience in this particular field not essential but applicant should have a good general business background. An engineering background would also be helpful. Outstanding opportunity to learn. Mail qualifications and experience. **0653.**

Gas Engineer—Growing natural gas company located in north central area has opening for gas engineer experienced in preparation of material for presentation to regulatory bodies and in gas distribution work, including appliance installation on customers' premises. Salary commensurate with ability and experience. Replies confidential. **0654.**

Industrial Engineer—Experienced on time study, methods, processing and estimating in the gas heating or related fields. A new job created by reorganization and expansion of certain activities in the heater division of a long-established corporation. Location—Indianapolis. A resume, detailing qualifications and salary requirement, will receive prompt attention. **0655.**

Project Engineer—New product research with advancement possibilities for engineer experienced in design and development of gas furnaces or other home appliances. The position is in Indianapolis, with the heater division of a well-known corporation. A resume with complete details will receive full consideration and a prompt reply. **0656.**

Gas Sales Manager—Aggressive administrator and salesman, able to recruit sales force and lead and drive them to real results. Real opportunity for able man in northeastern manufactured gas utility. Salary, commission and override. Record in similar assignment necessary. Only those submitting full details in first letter considered. **0660.**

Gas Appliance Salesman—For northeastern manufactured gas utility. Fine earnings opportunity for young hard-hitting salesman. Other appliance sales experience or general sales experience, which includes canvassing, will be considered. Salary and commission. Really reasonable living costs at assigned location. Full details in first letter. **0661.**

Project Engineer to take charge of design and development of gas fired unit heaters and furnaces by company manufacturing a varied line of air conditioning and heating equipment. Please give education and experience. **0662.**

Sales Representatives—A well organized gas company serving New Jersey has openings for three men between 25 and 35 years of age as industrial and commercial sales representatives. A good salary, and an excellent chance for advancement are awaiting aggressive men with technical sales background. **0663.**

Rate Engineer—New York consulting firm seeks services of thoroughly qualified rate engineer who has had several years responsible experience with an electric and/or gas operating utility. In reply please give detailed resume of experience, education, personal information, and salary expected. Replies will be held confidential. **0664.**

Direct Salesman for Gas Appliances and Heating Equipment. Reorganization of sales department makes it possible for a real salesman to earn $8-10,000 a year. Protected territory. Appliance and heating equipment sales experience helpful but not necessary. City is all natural gas; rates approved; gas heating costs reduced 25%. Excellent opportunity in a very progressive New England public utility—103 years old privately owned. Only replies giving complete, detailed information will be considered. Replies confidential. **0565.**

East Ohio Promotes

(Continued from page 20)

Other distributors and manufacturers used merchandising aids for dealer meetings and in district sales offices. But with all offers of advertising material went the stipulation that the slogan remain intact. No special versions, revisions or changes for individual purposes are permitted.

One manufacturer went so far as to make use of the new logotype mandatory in cooperative dealer ads, refusing his cooperation unless the slug was included.

A large percentage of the dealers in East Ohio's 3500-square-mile area put in gas window displays, and in Cleveland alone 100 windows carried special gas appliance displays featuring the slogan material. In Cleveland, 229 dealers, including the ten downtown department stores, were covered with literature and merchandising aid material. These as well as other Cleveland dealers ran 171 ads in local newspapers from May 12 to June 22. Most of these ads carried the new logotype.

One of the most interesting promotions was that put on by two large branch establishments of a large Cleveland department store, which played the "Every Hour" radio commercial on the store P. A. systems for one week during a gas range demonstration promotion.

The logotype is now lending itself to other media. East Ohio Gas dealer contact men will use it on their calling cards and will be supplied with book matches bearing the new design.

It is too soon to appraise fully the impact of the campaign, as far as sales are concerned. Meanwhile we are getting some indication of the slogan's popularity. For example, children throughout the East Ohio area are singing and whistling the "Every Hour" jingle, and a number of cashiers at our business offices have been flabbergasted to have customers, dropping in to pay bills, greet them by reciting the slogan.

One of the most satisfying reactions has been the wholesale and voluntary approbation of gas appliance dealers, who almost to a man agree the campaign was one of the finest promotions ever to spark the business. The dealers' only concern is that we continue our efforts along these lines.

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